

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1642.—Vol. XXXVII.

LONDON, SATURDAY, FEBRUARY 9, 1867.

{STAMPED .....SIXPENCE.  
{UNSTAMPED.....FIVEPENCE.

### Mining Exchange, London.

**MINING EXCHANGE, LONDON.**—As the rules of the Mining Exchange prohibit all its MEMBERS from ADVERTISING MINING SHARES at FIXED PRICES, the Committee feel it their duty to notify that they have no means of offering redress to such of the public as may deal with those advertising shares at fixed prices.  
A List of the Members can be had on application to the Secretary.

**MR. JAMES CROFTS, STOCK AND SHAREBROKER,**  
No. 1, FINCH LANE, CORNHILL.  
(Established 23 years.)

Mr. Crofts having devoted his attention to the position of a large number of mines which have recently emerged from almost total forgetfulness into favourable notice, refers to his remarks on p. 84, in this week's Journal, in reference to a selection he has made of such mines, of which the following is a list, and confidently recommends purchases without delay:—

Prince of Wales.	Drake Walls.	North Dolcoath.
Marke Valley.	East Lovell.	Redmoor.
Kitty (St. Agnes).	East Carn Brea.	Great Retallack.
Great North Downs.	Great Wheal Fortune.	Wheal Trelawny.
North Crofty.	Rosewarne United.	South Condurrow.
Wheal Uny.	Frank Mills.	Cook's Kitchen.
Gawton United.	Stray Park.	Great South Chiverton.
Prosper United.	Road Hill & Ransom.	Wheal Grenville.
South Darren.	East Rosewarne.	South Grenville.

HOLDERS of any of the above will suit their own convenience as to further purchases, but the Mr. Crofts believes that a more valuable list of shares, for either SPECULATION or INVESTMENT, has never yet been suggested to the mining public.

Bankers: National Bank of Scotland, Finch-lane.

**WILLIAM LANE (SUCCESSOR TO JAMES LANE),**  
44, THREADNEEDLE STREET, LONDON, E.C., STOCK AND SHAREDEALER (Established Thirty Years), has FOR SALE the following SHARES:—

50 East Wheal Grenville, 100 Lady Bertha, 2s. 3d.	20 Marke Valley, £4 7s. 6d.
50 Bottle Hill, 4s. 9d.	60 E. Rosewarne, 18s. 6d.
50 Calbeck Fells, 15s.	50 N. Treskerby, 50s. 6d.
25 Carn Camborne, 25s. 9d.	50 North Phoenix, £1.
50 Crebor, 11s. 3d.	50 Frontino (Gold), 6s. 3d.
10 Chiv. Moor, £2 3/4.	15 Great Caradon.
5 Copper Hill, 2s. 6d.	15 Great Laxey, £16 7/8.
75 Chontales, 51s. 3d.	35 Gt. No. Laxey, 25s. 6d.
50 Drake Walls, 23s. 9d.	15 Gt. No. Downs, £2 3/4.
50 Don Pedro d. Rey, 23s.	10 Great Vor, £17 7/8.
25 East Basset, £20 1/4.	50 Great Retallack, 4s.
25 East Carn Brea, £3 6 3/4.	60 Gwydyr Park, 1s. 3d.
15 E. Wh. Russell, £2 3/4.	30 West Wh. Kitty, 7s.

DRAKE WALLS, PRINCE OF WALES, NORTH CROFTY, EAST RUSSELL, CALDBECK FIELDS, and NORTH TRESKERBY.—SPECIAL BUSINESS in the shares of these mines, either as BUYER or SELLER, for cash or fortnightly settlement. Clients and parties in the country wishing to dispose of shares will find this advertisement a ready means of doing so, by forwarding me a list of their holdings. Approved references given to any part of the United Kingdom.  
Bankers: London and County Bank.

**MR. LELEAN, ENGLISH AND FOREIGN STOCK AND SHAREDEALER,**  
11, ROYAL EXCHANGE, LONDON, E.C.  
Bankers: Roberts, Lubbock, and Co., Lombard-street.

**GUIDE TO INVESTORS.**—Mr. LELEAN'S STOCK, SHARE, AND FINANCE REGISTER for February contains the seventh of a series of articles on the whole circle of Investments, and an analysis of the accounts of all the Joint-Stock Banks and Finance Companies; with such information as is necessary to guide intending investors amidst the shoals and quicksands of the multifarious species of Investments that now present themselves.  
Published by Mr. BAKER LELEAN, at his offices, 11, Royal Exchange, London, E.C. 6d. per copy, or 5s. annually, post free.

**JOHN RISLEY, 32, LOMBARD STREET, and MINING EXCHANGE, LONDON, E.C.,** has SPECIAL BUSINESS in East Grenville, Wheal Buller, and West Caradon shares.

**MR. THOMAS THOMPSON, MINING OFFICES,**  
12, OLD JEWRY CHAMBERS, LONDON, E.C.  
Mr. THOMPSON'S official connection with Great Laxey having ceased, and as he is constantly receiving the most reliable information about the mines, he could strongly advise his friends to consult him before operating.  
Mr. THOMPSON strongly recommends the immediate purchase of Westminster.

**GREAT LAXEY MINING COMPANY (LIMITED).**—CAUTION.—The attention of the directors of this company having been called to an advertisement of Mr. Thomas Thompson in the Journal, evidently published with an intention to injure the company, notice is hereby given, that Mr. THOMAS THOMPSON has been DISMISSED from his SITUATION as LONDON SECRETARY of GREAT LAXEY, and the public are CAUTIONED against ACCEPTING any INFORMATION from him relative to the affairs of the company.  
GEO. W. DUMBELL, Chairman of Directors.  
Isle of Man, February 5, 1867.

**GEORGE RICE, STOCK AND SHAREDEALER, 78, OLD BROAD STREET, LONDON, E.C.** (Member of the Mining Exchange), 5 years' experience, TRANSACTS BUSINESS in MINING SHARES, at close prices:—

Latest quotations.	Latest quotations.
Bryn Gwlog..... £15 - £20	East Caradon..... £5 1/2 - £6
Chiverton..... 8 - 8 1/2	Great Vor..... 16 1/2 - 17 1/2
Clifford..... 6 - 7	Great Retallack..... 48s. - 2 1/2
Chiverton Moor..... 20 - 22	Marke Valley..... 4 - 4 1/2
East Basset..... 20 - 22	North Crofty..... 2 - 2 1/2
East Chiverton..... 1 1/2 - 2	North Treskerby..... 2 1/2 - 2 3/4
East Grenville..... 2 - 2 1/2	Prince of Wales..... 32s. - 34s.
East Carn Brea..... 3 - 3 1/2	Wheal Grenville..... 1 1/2 - 1 3/4
East Lovell..... 9 - 10	West Chiverton..... 63 - 64
East Russell..... 3 1/2 - 4	

**SPECIAL BUSINESS in GREAT LAXEY MINE.**—Only 500 shares. Price about £20 per share. No calls. Regular dividend expected this year. Shares are now being at half the price of many Cornish lead mines making heavy calls.  
**SPECIAL BUSINESS in St. John del Rey, Chontales, and Calbeck Fells.** George Rice can advise investors what shares to sell and what to buy in the state of the market.  
Money advanced on mining shares.  
Bankers: Bank of England.

**MR. JAMES HUME, 74, OLD BROAD STREET, and MINING EXCHANGE,**  
TRANSACTS BUSINESS in ALL DESCRIPTIONS of MINE SHARES, nett, at closest prices.  
**SPECIAL BUSINESS in East Russell, East Lovell, Great Retallack, Great South Tolgus, Kitty (St. Agnes), Prince of Wales, Redmoor, East Carn Brea, Carn Cook's Kitchen, North Crofty, Bottle Hill, South Condurrow, Chontales Gold, Penstemon Gold, &c.**  
Many shares recommended by Mr. Hume have had a very great advance, and there are several which Mr. Hume feels assured will yet rise 200 or 300 per cent.  
Mr. T. HUME'S "Circular" forwarded on application.  
Bankers: The London Joint Stock Bank.

**WALTER TREGELLAS, 122, BISHOPSGATE STREET WITHIN, E.C., DEALS in ALL KINDS of bona fide STOCKS and SHARES, and BRITISH and FOREIGN MINES, either for cash or the fortnightly settlement at close prices.**  
Recommends the purchase of Don Pedro North del Rey, Anglo-Brazilian, East Caradon, South Crofty, West Frances, West Tolgus, East Gunnislake, Chiverton Moor, Camborne Vean, Emily Henricetta, and Westminster.  
Bankers: Alliance Bank.

**MR. GEORGE BUDGE, No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C.** (Established 19 years), has FOR SALE at net prices:—50 Pendone, 14s.; 3 West Shear Tor, £8; 100 Dale, 2s.; 100 West Chiverton, 6s.; 100 Hallenbeagle, 12s. 3d.; 7 Craddock Moor, 15s.; 15 Tolcarne, 8s. 6d.; 70 East Seton, 6s.; 100 Anglo-Brazilian, 11s.; 70 Don Pedro, 2s.; 20 Mineral Rights, 9s.; 100 Hollybush (£3 paid), £2 3/4; 50 Crebor, 10s.; 35 Great North Downs, £3 17s. 6d.; 50 East Rosewarne, 20s.; 1 Devon Great Consols, £42s.; 30 Great Retallack, 51s. 6d.; 40 Gawton, £3 6s. 9d.; 100 Frontino and Bolivia, 4s. 9d.; Wheal Seton, £10 7/8; 120 Gwydyr Park, 1s. 9d.; 70 South Grenville, 11s.; 60 United Mexican, 2s.; 20 East Carn Brea, £2 3/4; 10 Marke Valley; 40 Wheal Uny; 10 Mace-y-safu, £19; 10 East Russell; 20 South Callington, £1 3/4; 50 Wheal Agar.

**PROSPER UNITED MINE.—PETER WATSON'S**  
"WEEKLY MINING CIRCULAR AND SHARE LIST" of yesterday (Friday), Feb. 8, No. 410, Vol. IX., contains a SPECIAL REPORT on Prosper United Mine.

**PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES,"** of yesterday (Friday), Feb. 8, No. 410, Vol. IX., price 6d. each copy, forwarded on application, contains a leading article on the Share Markets, and important particulars respecting the following mines:—  
North Wheal Crofty. East Wheal Russell. Wheal Seton.  
West Caradon. East Wheal Lovell. Britanny Silver-Lead  
Drake Walls. Stray Park. Mining Co. (Limited)  
Prosper United.

With information as to the Tin Trade and Advance in the Copper Standard.  
**PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London, E.C.**  
**STOCK AND SHAREDEALER.—MR. PETER WATSON,**  
ENGLISH AND FOREIGN STOCK, SHARE, and MINING OFFICES, 79, OLD BROAD STREET, LONDON, E.C.  
Railway, Joint-Stock Banks, Dock, Insurance, Canal, Mining, Steam-ship, &c., and every other description of shares bought and sold at net prices.  
TELEGRAPHIC MESSAGES to BUY or SELL Railway, Bank, Mine, and other shares and stocks, punctually attended to, at net prices for cash, or for fortnightly settlements, with advice as to purchases or sales.  
Twenty-two years' experience.  
(Two in Cornwall and Twenty in London.)  
Bankers: The Alliance Bank, and the Union Bank of London.

From the close proximity of his offices to the Stock Exchange, as well as the Mining Exchange, PETER WATSON is enabled to act with promptitude on all orders entrusted to him, which at all times are carried out with punctuality, and to the best advantage of his clients.

**MR. EDWARD COOKE, STOCK AND SHAREDEALER,**  
79, OLD BROAD STREET, LONDON, E.C.  
Has SPECIAL BUSINESS in Chontales, Prince of Wales, East Lovell, Frank Mills, South Darren, West Caradon, Prosper United, and North Crofty. Stock Exchange securities dealt in at close market prices.  
Satisfactory references given in any town in the United Kingdom.  
Bankers: Alliance Bank.

**MR. C. A. POWELL, SHAREDEALER, 78, OLD BROAD STREET, LONDON, E.C.** (Member of the Mining Exchange).  
Purchases or sales effected at net prices, for prompt cash or account. Clients treated with in all cases at a fair margin on the market price.  
Mr. C. A. POWELL is prepared to BUY or SELL shares in any mines currently dealt in, and devotes especial attention to those prominently before the public.  
Daily Price List on application.  
Bankers: Bank of England.

**MR. WILLIAM SEWARD, STOCK AND SHAREDEALER,**  
19, THROGMORTON STREET, LONDON, E.C.

**MR. WILLIAM WARD, STOCK AND SHAREDEALER,**  
No. 29, THREADNEEDLE STREET, LONDON, E.C.  
**MESSRS. WARD AND JACKMAN,**  
STOCK AND SHAREDEALERS,  
CUSHION COURT, OLD BROAD STREET, CITY, E.C.  
Closing Prices, Friday Evening, February 8.

Buyers.	Sellers.	Buyers.	Sellers.
Chiverton..... £ 5 1/4 - 5 3/4	Marke Valley..... £ 4 1/2 - 4 3/4	Chiverton Moor..... 6 - 6 1/2	North Retallack..... 2 1/2 - 2 3/4
Clifford..... 6 1/2 - 6 3/4	North Treskerby..... 2 1/2 - 2 3/4	Cook's Kitchen..... 11 1/2 - 12	North Crofty..... 5 1/2 - 5 3/4
Drake Walls..... 1 - 1 1/4	South Condurrow..... 17s. - 1	East Caradon..... 5 1/2 - 6	Prince of Wales..... 32s. - 33s. 6d.
East Carn Brea..... 3 1/4 - 3 1/2	Prosper United..... 3 - 3 1/4	East Lovell..... 10 - 10 1/2	Tincroft..... 18 1/2 - 14 1/2
Great Vor..... 17 - 17 1/2	West Chiverton..... 25 1/2 - 26 1/2	Great Retallack..... 13 1/2 - 14	Wheal Buller..... 25 1/2 - 26 1/2
Great Laxey..... 16 1/2 - 17	Wheal Basset..... 65 - 70	Great No. Downs..... 34 - 4	Wheal Uny..... 24 - 26
Great South Tolgus..... 34 - 3 1/2	Wheal Kitty (St. Agnes)..... 3 - 3 1/2		

Messrs. WARD and JACKMAN refer their friends to their remarks on p. 35 respecting many of the above mines.  
Bankers: London and Westminster, Lothbury.

**MR. EDWARD BREWIS recommends as a safe and rising**  
property East Bottle Hill Tin and Copper Mine, selling at 4s. to 6s. per share; decidedly the cheapest share in the market at present. Regular sales of tin will be made shortly, and the shares will go to their value.  
No. 8, Warrford-court, Bank, E.C., London.

**JAMES D. GINN AND CO., STOCK AND SHAREDEALERS,**  
3, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.  
WHEAL SETON.—These shares will continue to pay about 20 per cent. "at the present price," even without any further improvement in the mine. We have had the mine inspected this week by Capt. Charles Thomas, manager of Dolcoath and West Seton. A copy of whose report we will forward to anyone on receipt of £1 is. We advise shareholders not to part with their shares at present price, £110 and £115, but rather buy more.

**BARTLETT AND CHAPMAN, STOCK AND SHAREDEALERS, 2, BUCKLESBURY, LONDON, E.C.**  
Business transacted in every description of stocks and shares at lowest market prices, free of commission.  
All communications will receive immediate attention, either personally or by letter.  
N.B.—LOVELL CONSOLS: Intending investors should not delay purchasing at present low prices, £3 to £3 1/4. See report in this day's Journal from the manager, WEST MARIA and FORTESCUE.—An OFFER WANTED for 25 shares.  
Bankers: London and Westminster.

**GREAT SOUTH CHIVERTON MINE.—BARTLETT AND CHAPMAN** recommend the PURCHASE of these SHARES for PERMANENT HOLDING. Recent indications there is not the least doubt but that a good paying lode will be met with in a short time. The set joins West Chiverton to the north, Wheal Chiverton to the east, South Chiverton to the south, and Chiverton Moor to the west. The lodes are parallel to those of West Chiverton. £100 or £200 invested in this property cannot fail to prove highly remunerative. Samples of the ore from the 20 ft. level can be seen at the office, and should be inspected by all intending purchasers.  
Further particulars, with plans of the district, can be obtained on application to BARTLETT and CHAPMAN, No. 2, Bucklebury, London, E.C.

**MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S, BISHOPSGATE STREET, LONDON, E.C.** (Established 12 years), has FOR SALE the FOLLOWING SHARES, at net prices:—  
50 Calbeck Fells, 14s. 3d. 40 Lady Bertha, 8s. 3d. 50 No. Dolcoath, 4s. 3d.  
30 South Darren, 27s. 6d. 10 Gt. Laxey, £16 13s. 9d. 100 Rosewarne Cons., 6s.  
5 West Caradon, £11 1/2. 25 Gt. No. Tolgus, 18s. 10 East Lovell, £10 6s. 8d.  
25 North Crofty, 24s. 9d. 10 E. Caradon, £5 16s. 3d. 35 Drake Walls, 23s. 9d.  
20 North Crofty, £5 7/8. 5 E. Rosewarne, 18s. 6d. 50 E. Carn Brea, £3 6 3/4  
15 Chiverton Moor, £2 3/4. 4 W. Chiverton, £2 1/2. 50 Chontales, £2 1/2.  
5 North Roskear, £11 1/2. 50 Prosper United, £3 3/4. 25 Hallenbeagle, 14s. 9d.  
14 Gt. Retallack, 48s. 9d. 20 East Grenville, £2 3/4. 20 Wh. Grenville, 22s. 6d.  
20 Gt. No. Downs, £3 18s. 9d. 50 Prince of Wales, 32s. 3d. 5 Wh. Trelawny, £11 1/2.  
10 Chiverton, £8 11s. 3d. 20 Wheal Uny, £2 3/4. 30 S. Condurrow, 19s. 3d.  
20 Gt. No. Laxey, 26s. 6d. 40 Crebor (call p.), 11s. 6d. 7 East Russell, £2 13s. 9d.  
1 Wheal Seton, £11 1/2. 50 Redmoor, 8s. 6d. 35 Frank Mills, 35s. 6d.  
10 Marke Valley, £4 8 1/2. 10 Chiford, £6 15s. 9d. 3 East Basset, £21 1/4.  
50 Frontino, 6s. 6d. 25 North Basset, 4s. 11d. 20 Lovell Consols, 69s.  
50 Gt. S. Chiverton, 5s. 6d. 5 Gt. Wh. Vor, £17 8 1/2. 1 West Seton, £13s.

**MR. R. EMERSON, 28, GREAT WINCHESTER STREET, LONDON, E.C.,** has the FOLLOWING SHARES FOR SALE at net prices:—50 Dale, 2s. 6d.; 50 North Dolcoath, 6s. 6d.; 100 East Bottle Hill, 5s.; 10 Leeds and S. Aubyn, £5; 20 Wheal Agar, 25s.; 3 Carn Brea, £18; 100 Central Snailbeach, £2s. 6d.; and a BUYER of 50 Westminster, 50 Great Laxey, 100 West St. IV, 100 Wheal Alice Alfred, and 100 Budnick Consols.  
My numerous clients desirous to be furnished with more detailed information than can be well supplied in my advertisement, I have resolved on issuing a Circular containing valuable information, commencing with this month, which will be forwarded to them daily at their request. I will also furnish any other information with a Circular on receipt of six postage stamps.  
Advice given on the sale and purchase of shares.  
Eighteen years' experience in Cornwall and thirteen in London.

**MR. CHARLES THOMAS,**  
MINING AGENT, GENERAL SHAREDEALER, and AUCTIONEER,  
3, GREAT ST. HELEN'S, LONDON, E.C.

**NORTH POOL MINE.—MR. CHARLES THOMAS** has a NUMBER OF SHARES FOR SALE, for which no reasonable offer will be refused.—3, Great St. Helen's, London, E.C.

**MR. T. E. W. THOMAS, MINING AGENT AND GENERAL**  
MINING SHAREDEALER, UNION CHAMBERS, UNION COURT,  
OLD BROAD STREET, LONDON, E.C.

**MESSRS. LANE AND GIBBS, 2, ROYAL EXCHANGE**  
LONDON, E.C. (Members of the Mining Exchange), STOCK AND SHAREDEALERS, AND FINANCIAL AGENTS, transact business in all kinds of securities at closest net prices for cash or account.  
Parties of respectability can have transfers registered in their names previous to payment.  
Daily price list on application.  
Bankers: London and County Bank.

**MR. JOHN BATTERS, STOCK AND MINING**  
SHAREBROKER, 13, THROGMORTON STREET, LONDON, E.C.

**MESSRS. MCNEILL AND LONG, STOCK, SHARE, AND**  
MINING DEALERS,  
31, THREADNEEDLE STREET, LONDON, E.C.

**MESSRS. WILSON, WARD, AND CO., STOCK AND**  
SHAREDEALERS,  
16, UNION COURT, OLD BROAD STREET, LONDON, E.C.  
Can recommend two good mines for investment.

**MR. JOHN LITTLE, STOCK AND SHAREDEALER,**  
77, OLD BROAD STREET, LONDON, E.C. (late of Redruth).  
Immediate attention to orders by telegraph or letter.  
Prompt cash settlements.

**MATTHEW GREENE, STOCK AND SHAREDEALER,**  
ST. MICHAEL'S HOUSE, CORNHILL, LONDON, E.C.  
NEW CLIFFORD.—This mine is looking unusually promising. Captain James Barrett has just inspected the mine, and his report will appear in the MINING JOURNAL next week.

**SAFE INVESTMENTS FOR CAPITAL,**  
Paying 5 to 20 per cent. per annum on the outlay.  
SHAREHOLDERS, CAPITALISTS, TRUSTEES, and INVESTORS seeking valuable and reliable information, and requiring safe, sound, and profitable investments, should at all times consult  
**SHARP'S GENERAL INVESTMENT CIRCULAR**  
(Post free).  
It is a safe guide, giving every information to shareholders and capitalists.  
GRANVILLE SHARP, STOCK & SHAREDEALER, 32, FOLTRY, LONDON.

**NANGLE and EAST CHIVERTON MINES.—WANTED**  
TO PURCHASE A FEW SHARES in these two mines. Sellers will please state number and lowest price for cash to GRANVILLE SHARP, No. 32, Foultry, London, E.C.

**MR. JOHN B. REYNOLDS,**  
OFFICES, 70 and 71, BISHOPSGATE STREET WITHIN, LONDON, E.C.  
Business transacted in British and Foreign Stocks, Railway, Bank, Insurance, Financial, or Mining Companies Shares, and all Miscellaneous Securities, at the lowest market quotations.  
Exchanges effected and purchases found for shares not generally marketable.  
Mr. REYNOLDS is a BUYER of any number of West Wheal Kitty shares. Sellers please state number and lowest price.  
Mr. REYNOLDS refers to his letter, on p. 85.  
Telegrams promptly attended to. Established Ten Years.  
Bankers: City Bank.

**MR. J. B. REYNOLDS'S CIRCULAR FOR FEBRUARY**  
AND MARCH.—In consequence of the mass of information which has to be accumulated before this Circular can be completed, notice is hereby given that the publication will not take place before the 30th inst. In the meantime, applications will be received, and should be promptly sent to Mr. J. B. REYNOLDS, 70 and 71, Bishopsgate-street, London, E.C.—February 9, 1867.

**MR. T. ROSEWARNE, 81, OLD BROAD STREET,**  
has BUSINESS, at close market prices, as BUYER or SELLER, in:—  
Bedford United. Drake Walls. Great South Tolgus.  
North Roskear. Okel Tor. Calbeck Fells.  
North Crofty. East Rosewarne. West Caradon.  
East Russell. North Treskerby. Devon Consols.  
Wheal Seton. East Gunnislake. Chiverton Moor.  
East Lovell. Marke Valley. East Grenville.  
East Caradon. East Carn Brea. Wheal Buller.  
Great Vor. Gawton. Great Retallack.  
West Chiverton. Princess of Wales. Prosper United.  
South Frances. West Basset. Great North Downs.  
South Grenville. North Retallack. Tincroft.  
Dale. Great South Chiverton. South Herodsfoot.

**AN OFFER WANTED** for Lady Bertha, Old Gunnislake, Gwydyr Park, Pendone, and St. Day United.  
Parties desirous of investing in mining should consult T. ROSEWARNE, as a great deal of money is to be made in several of the above mines.  
Money advanced on mining shares.  
Bankers: Bank of England and Consolidated.

**MR. G. D. SANDY, STOCK AND SHAREDEALER,**  
No. 48, THREADNEEDLE STREET, LONDON, E.C., TRANSACTS BUSINESS in EVERY DESCRIPTION of STOCK EXCHANGE SECURITIES, MINING and FINANCIAL ENTERPRISES, at close market prices.  
Mr. G. D. SANDY recommends the immediate purchase of New Tamar, and Lovell Consols, as a rapid advance in price is certain to take place early this year.  
Mr. G. D. SANDY'S Circular for the present month, is now ready, and should be perused by all interested in mining enterprise. Gratis, post free.  
Correct Daily Price List may be had on application.  
Money advanced to any amount on legitimate stocks and shares.  
References exchanged.

**FOR SALE.—NINE SOUTH HERODSFOT SHARES,** at £4 10s. (600ths). The Herodsfot lode, rich in silver close up to the boundary of this sett, will be reached in a week or two in the 86 fathom level.—Address, "K. W.," at Wavish Brothers, Newman's-court, Cornhill.

**TO BE SOLD, BY PRIVATE CONTRACT, FIFTY SHARES**  
in the HOLYWELL LEVEL MINING COMPANY, and ALL INTEREST in respect thereof in the HOLYWELL LEVEL LEAD MINING COMPANY (LIMITED).—Applications, stating price offered for same, to be sent to CHARLES TURNER, Esq., official assignee, South Castle-street; or Mr. TYNDALL, solicitor, 8, North John-street, Liverpool, on or before the 6th day of February inst.

**TO BE SOLD, cheap, a PORTABLE ENGINE of 14 horse**  
power, double cylinder, of first-class construction, workmanship, and material. Winding gear to order. SECOND-HAND PORTABLES FOR SALE.—Apply to Messrs. BARROWS and CARMICHAEL, engineers, Banbury, Oxon.

**RAILWAY WAGONS.—TO BE SOLD, TWENTY RAILWAY**  
WAGONS, in good working order, some of them just out of the repairer's hands, built by Mr. S. J. Clave, Long Eaton.  
Apply to Mr. R. HARVEY, Little Eaton, near Derby.  
Can be delivered at once.

**MESSRS. DEBENHAM AND CO.,**  
No. 37, MOORGATE STREET, LONDON, E.C.  
(and at ST. ALBANS).  
TRANSACT BUSINESS in every description of STOCK EXCHANGE SECURITIES, MINING and MISCELLANEOUS SHARES, at close market prices.  
FOR SALE:—50 Frontino and Bolivia, 75 Prince of Wales, 10 North Roskear, 20 Bryn Gwlog, 10 Wheal Vor, 20 East Russell, 100 New Quebrada.  
BUYERS of Worthing and West Caradon.

**MR. JOHN HOSKING, MINING ENGINEER,**  
(Late of Ashburton, Devon).  
Mr. HOSKING, having had 20 years' practical experience, OFFERS HIS SERVICES as MINE SURVEYOR, VALUER of MINING MACHINERY, or to INSPECT any MINING PROPERTY, either at home or abroad. Terms on application.—14, Liverpool-street, London, E.C.



## Original Correspondence.

## IMPROVEMENTS IN WORKING THE BARNSELY COAL.

SIR.—I find, on reading the evidence given at the Oaks Colliery coroner's inquest, the question asked—"Can you suggest a mode of working the Barnsley seam of coal in such a way as to avoid having gas in the goafs?" I venture to throw out a suggestion that would, in my opinion, very much obviate such consequences. The mode of working the coal I should recommend would be thus—Sink the pits or shafts, in the first instance, in such part of the estate as to be in the deep of the mine; then drive out all necessary roads and airways in the solid coal to the crop side of the estate as far as the coal is intended to be worked. Then at such extremity sink one or two air-shafts, such as the case might be thought to require, according to the area of level intended to be worked out; and then commence to work the level down hill towards the winding-shafts, and make all necessary airways to the upcast shaft, at the crop side of the estate. The faces of the mine would always be descending as the slices of coal are worked off, and the passages to the upcast shaft would be up an incline, and, by the law of specific gravity, the hydrogen gas would ascend to the higher regions, and so escape up the upcast shaft, and would drain out of the mine if passages were provided for its escape. No men would be required to work in the return air, except such as were wanted to keep the return air passages in proper order. Where the seam of coal is free from water there could be no great difficulty in working the coal down hill. It would, I am aware, cause a longer time to elapse before being able to win a great quantity of coal after the winding-shafts are sunk; but I suppose the perfect safety of the men is before such a consideration as that. I think all men ought to make the best suggestions they can to avoid such awful calamities as have happened in Yorkshire, and this is my reason for writing this letter, and which I hope to see followed by others.

JOHN WARDLE, Mining Engineer,  
Codnor Park Ironworks, near Alfreton.

## WATER-WORKS AT HARROW—BORING-MACHINE.

SIR.—Referring to the completion of a well at Harrow-on-the-Hill, sunk for the Water-Works Company, reported in last week's Journal, allow me to call attention to a novelty in the boring for the same. The depth of 200 ft. in the chalk, with a bore of 15 in. diameter, was accomplished in the short space of six weeks, working days only. The power employed was steam, working a machine designed by Mr. Edward Preece, which was able to give 36 blows per minute of the chisel, with a fall of about 3 ft. Beds of flint were passed through varying from 4 to 12 in. thick, and generally at intervals of 18 to 24 in. apart. At the depth of 193 ft. in the bore, one bed of very hard flint, nearly 6 ft. in thickness, occupied two weeks out of the six to get through it.—Feb. 6.

HARROWENSIS.

## ON AMALGAMATION WITH SODIUM.

SIR.—It is now a considerable time since a paragraph in your much-esteemed Journal attracted my attention, in which the ground was taken that sodium produces "no beneficial results until it is oxidised and becomes soda, and is dissolved in the water of the pan;" the said paragraph having emanated from a writer in the *Mining Press* of San Francisco, of April 21, 1866. The fallacy here involved was briefly refuted by me in my paper "On Amalgamation with Sodium," read to the American Association at Buffalo, which you published in the *Mining Journal* of Nov. 24. The vitality of an error, however, so long as it endures, is sometimes surprisingly great, and its mischievous career very rapid—in this case the mischief lying in the distraction of many interested in mining from a new scientific principle, whose adoption promises substantial progress, to an *ignis fatuus* which will surely lure them back into empirical darkness. This particular error, engendered on the shores of the Pacific, has been borne by the trade winds around the world (having appeared, as I find, in Australia before reaching you), and has just commenced going the rounds of our newspapers in the Atlantic States. While it is on its tour back to its "native shore," doubtless to reappear there in new forms, let me take the liberty to stir up Madame Truth where she rests, as is her wont, severely tranquil, at the bottom of her well, and produce her again before your readers. The few lines referred to, as devoted to this subject in my Buffalo paper, were:—

"Another Californian writer has thrown out the suggestion that the difficulty of enflaming the particles of gold with quicksilver is due to strongly adherent films of air; and having observed, he says, that certain metallic powders are more easily wetted by water when the latter contains a caustic alkali, he imagines some obscure analogy between this case and the enflaming of gold by quicksilver, and then reasons therefrom that the virtues of the sodium must be wholly attributable to the caustic soda formed by its oxidation, and that the latter may be substituted for it. Had he made experiments on some native gold before making his hypothesis the latter would, probably, have never been made. The air-film idea occurred to me early in my investigations; but, finding that under alcohol, and *in vacuo*, the refractory gold did not amalgamate better, I abandoned it. I may add the effect of sodium is the same when no water is present at all."

I shall now add a remark or two more, hoping I shall thereby leave this individual of the "hydra-headed" species but few or none of its many lives. The use of caustic alkalies, such as soda or potash, has been familiar to millmen almost from time immemorial: therefore, being among the innumerable *nostrums* which all of them have at one time or another tried in cases of difficulty in amalgamating the precious metals, or when their quicksilver has become floured or "sick," as some term it. So far, however, is their use from being attended with the beneficial effects of metallic sodium, that they have frequently been found to aggravate the obstacles met with. In point of fact, one of the objections to Sodium urged here by intelligent millmen, of some chemical knowledge, is its necessary conversion, sooner or later, into caustic soda, the injurious effects of which they are familiar with; and I have had occasion several times to meet this objection by showing that the quantity of caustic soda thus formed is much too small to cause appreciable effect.

It is also so far from correct that "the Sodium produces no beneficial results until it becomes soda," that another objection made by some who have used it without any previous instruction from me as to the proper mode of use has been that it is too soon converted into caustic soda, thus entirely losing its beneficial effects. As to the familiar phenomenon cited of the metallic or bronze powder floating in water caused to sink by an alkali, most chemists, I opine, in the absence of proof to the contrary, would attribute the effect of the alkali to the removal of films of grease which caused the repulsion, from whence the floatant condition. The occasional benefit found from the use of alkalies in gold amalgamation may, no doubt, be usually attributed to similar detergent actions.

Broadway, New York, Jan. 25.

HENRY WURTZ.

## IMPROVED PNEUMATIC STAMP.

SIR.—Last Saturday's Journal contained a lengthy description of Childs' Pneumatic Stamp, and also an account of the work done by one erected at the Golconda Gold Mines—a two-head improved stamp, crushing 5 tons of quartz per day, and increasing the yield of gold per ton from \$6 on the old method to \$32 on the new.

When an inventor introduces any new invention, for any purpose whatever, he should be very careful to test the same against a machine of the most improved principle then known, but this Mr. Childs evidently has not done. If he will take the trouble to look over the published reports of the Port Phillip and Colonial Gold Mining Company he will find that, with good Cornish stamps, with square heads, they crush on an average about 4 tons of quartz per head per day, or 48 tons for a 12-head battery, against 5 tons for the pneumatic stamps; and that during the past two years, with an average produce of gold obtained of about 7 dwts. per ton of quartz crushed, the average loss was only about 2 dwts. per ton, a great part of which gold is recovered by an after process. Now, before the Golconda Company go to the expense of erecting any more of the so-called improved stamps, I would advise them to call in a good Cornish engineer, to put the stamps they have already erected into good working order, and get a person of experience to take charge of their reduction works, who will enable them to extract the gold from their quartz with little, if any, loss.

Round stamp-heads, caused to rotate at each blow, have been tried in this country 20 years ago, and were discarded, being not equal to the square heads in general use. Perhaps Mr. Childs will explain how

the blowing down of the stamp-head is any saving, as it will require the same power to lift it at each blow. The work done by any machine is the same as the work applied, minus friction and the resistance of the air.—*Cornwall, Feb. 6.*

## ON THE INVESTMENT OF CAPITAL IN MINING.

SIR.—In some recent communications I have called attention to investments in mining undertakings, and will now, with your permission, pursue the subject a little further. The reputation of this description of property has suffered from causes which should not exist, and which it is the duty of persons engaged in mining undertakings to remove or prevent, and of every intelligent person who wishes well to our commercial prosperity to point out. One of the chief of the causes of injury is that share jobbing has been by a large portion of the investing public confounded with *bona fide* investment. The fluctuations in price incidental to the former have been set to the account of mining itself; and it is still supposed by many, whose minds ought to be disabused of the prejudice, that mining undertakings are so peculiarly uncertain in their ultimate results and their progressive value, that no reliance can be placed at any time upon investments made in them. Another source of injury to the character of mining speculation has been the want of reasonable perseverance on the part of many investors. These persons forget that the mine must not only be opened but worked. The metal will not come to the surface of itself, any more than a ship will go to sea of itself—as certainly as the latter must be furnished, launched, and manned, must a mine be opened, provided with all operative appliances, and worked. If the metal be there, the work must be continued until it is drawn thence, and sent to market for the profit of the owners. Many investors have without consideration taken shares in a good prospective mine, and because it did not yield up its treasures before it was properly wrought, and as early as ignorance, impatience, or cupidity desired, they abandoned their shares, or sold them at a sacrifice; thus bringing what was really good into evil repute. Men of this description have gone about lamenting their losses in undertakings that were sound and sure, and even enormously profitable, spreading a sort of panic against mining speculation, however founded upon experience and science. Now, Mr. Editor, I wish you and all intelligent persons to lift their voice and wield their pen against these two things, until mining undertakings shall rest on their merits, and their character not be in the hands of "bulls," or "bears," or share jobbers, or in the hands of restless, impatient, and unthinking investors, however honest their original purpose in investing. I hold, Sir, that there is more certainty that *bona fide* investors in mining undertakings will realise large profits than there is in connection with those of any other that are in the least degree speculative. And what business is not speculative, more or less? The manufacturer, shipbuilder, merchant, newspaper proprietor speculates, from the necessity there is to do so in the nature of all business. Even the investor in Consols is a speculator, for should circumstances arise to compel him to sell, or should his investment be brought into the market at his decease, the price may be seriously more or less than the amount originally invested. The year 1866 has furnished investors generally with lessons of wisdom, which they will do well to consider. Dr. Benjamin Franklin is often lauded for the wisdom of his often-quoted sentence—"Experience keeps a dear school, and fools will learn in no other." It is much to be questioned whether fools will learn in any school; and if men profit by observing what passes in the experience of others, the school in which such a student studies is, after all, tolerably cheap.

All observing persons must see in the events which followed the course of 1866 much to render permanent instruction as to mining investments. Those who dabbled in shares have ruinously paid for their folly—those who invested in the actual work of mining have preserved and increased their property. It is not necessary to go over again the ground travelled in a previous letter, showing the gambling process, and individual wrecks, in connection with share jobbing. Prices were run up or down as the "bulls" or "bears" forced them, when the integral value of the properties represented did not in the least fluctuate. Often the property was not represented at all by the shares; hundreds of shares were converted into thousands, and thousands into tens of thousands in the share market. Neither are the most valuable properties always chosen to be shoved up and down on the share market sliding scale; so that, in fact, the nominal values of shares are no indices to the real worth of the property thus hawked and cried about. The past year has been remarkable as resulting in a great increase in the value of *bona fide* undertakings. Since the present year commenced North Croft, Margaret, West Frances, Cook's Kitchen, Wheel Basset, and Carn Brea have all advanced in value, because the work has progressed, and the benefit of solid and steady investment has been seen. I am of opinion that if capitalists will seek out good progressive mines such reasonable ventures will richly repay them. The advance in the value of mining shares shows every indication of continuing. The prices of tin and copper have much increased, and are still looking up. Our commerce has not been recently so active, and the manufacturers of the North have not been so busy, yet metals rose in price. Now spring is opening, quickening our physical and mental activity, and causing the pulse of trade also to beat faster. From various quarters there is a prospect that the articles created from the produce of our mines will be in request. The relative cost of working our tin mines, and those of their rivals in the Straits, has changed in favour of the former, and must change still more and more rapidly in the same direction. Money is now at a rate which will enable our manufacturers and merchants to operate, and this circumstance facilitates the working of our mines. The capitalist who lends his money to foreign Governments, who never pay, or who defraud him by altering the terms of the bargain, may, if he chooses, find in our silver-lead, copper, and tin mines safe investment. In such cases results do not depend upon the caprice or need of a corrupt foreign court, or ambitious foreign minister; the money is invested at home. Science can pronounce upon the character of the project, and prosperity is visible and tangible. Remarks have been sometimes made as to the number of shares into which a mine should be divided; but it is immaterial whether the investor holds 5-1520ths or 25-1024ths—the property is the same, and the works, if properly conducted, should be the same, and in neither case can a proper estimate be placed upon its value before it is sufficiently developed.

Gresham House, London.

THOMAS SPARGO.

## HOW TO TURN THE PRESENT CRISIS TO THE ADVANTAGE OF MINING.

SIR.—In my letter in last week's Journal I confined myself to suggesting that the dissolution of the copper smelters' monopoly should be the signal for union among ore producers, of such strength as the influence of our leading miners and the vast importance of the subject would lead us to expect or demand. Of course, my remarks apply equally to unfair tyranny in the tin market. Surely there is power enough in our mining interest to form such a co-operative defence as can compete with and defy any such tyranny, if that interest will but assume its proper functions. The "unholy alliance" should have taught them that "union is strength" for good or evil, and they may rest assured that a well-entrenched moral for a good cause must triumph over one for evil, if it will but exercise the moral courage necessary to assert its power.

I alluded also to the fact of our being (as we hope) emerging from a time of dire depression—this, *per se*, is matter of congratulation; but let us not in our opening prosperity forget the powerful lessons which the late ordeal of distress ought to teach us. Mining has been severely tried as a remunerative investment, and people's thoughts have naturally turned to the comparative numbers of paying, self-supporting, and calling mines. Unfortunately, the limited number of dividend mines forces on them the question—"How much of the ore produced for the world's wants is supplied by mines which pay nothing, or at an actual serious cost to the adventurer?" Those who are interested in the well-being and, indeed, the maintenance of our mining industry, should turn the late lessons to account, by setting seriously to work to see if by better systems of economy, and other means, a large addition cannot be made to the Dividend List, and many that call to be at once made self-supporting. Unfortunately, we have here another hitch. Who is interested? Of the many thousands who invest or speculate in mines how very few there are who trouble to see how their money goes, or whether the concerns are well or ill managed. If one of the same men takes a farm or a shop he never dreams that they will do other than bring him to ruin unless he takes care by his personal attention to see that they are managed to the very best advantage; but when a man buys shares in a mine he has a general, dreamy notion that the concern will manage itself without his troubling about it, as long as he pays all calls they choose to make on him, or receives his dividends. Here, I consider, is the main cause of the continued want of reform in mine management. Let every man who invests in mining, if he can spare the time, make a point of understanding enough of mining to enable him to form some sort of opinion for himself, and to understand what he sees and hears from his reliable inspecting agents, &c.; and let him make his presence felt and his voice heard in the right direction when he attends the meetings, which he should do as much as possible. If a few active, intelligent

adventurers in each concern would only adopt this course, and make it their business, mine adventure would then lose its bad character as a gambling and risky affair, and would generally cease to be abused by those who lose their money, because they had not understood the property they had so carelessly adopted, and had entirely neglected it.

If mining, therefore, is to be conducted on a reformed basis, this is, I consider, the first step to be taken. When people once understand a little of the nature of mining they will begin to find it a very agreeable and interesting pastime, which will take them generally into a lovely country, and among a hearty, genial set of fellows, the majority of whom would second them in their endeavours to establish sound reforms—for they are acute enough to see that, unless some steps can be taken, the occupation which enables them to earn a living in their much-loved country will ere long have to be sought by banishment to distant lands, for home mining cannot exist without reform. I must postpone till next week a humble effort to offer a few general suggestions as to what the tendency of the reforms should be; and I hope that my suggestions will not fail dead, but will be quickly adopted by adventurers generally.

FREE TRADER.

## MINERAL SHIPMENTS FROM ABERYSTWTH AND ABERDOVEY.

SIR.—I am desirous of ascertaining the names of the several lead mines situated upon the Vale of Llanbaddarn, to the Devil's Bridge and to Hafod, and also in the neighbourhood of Machynlleth—so that shipments could be made from the ports of Aberystwith or Aberdovey; and lead mines near Much Wenlock, on the Severn Valley Railway, not far from Shrewsbury.

17, Lawrence Pountney-lane.

[On the south bank of the Rhedol Valley the first and most westwardly mine is that of Troedrhylweir (Vale of Rhedol), which very recently has resumed working. Eastward from this are the Abernart, Goch, Cwch-yr-Arian, Pant Mawr, Llwybr Llwynog, Rhwyryg (Rhedol United), and Gontfryn. A little south of these, on the Devil's Bridge, are Blaen Gennart, Kyr Tomen, Prignant, and Fronogoch. On the north bank we have Tyllywyd, Bwa Drain, Ty'nffron, Gelly'r'Elirn, Drosog, Nanteos and Penrhil, and Cae Cynon (now Glanrhedol Mine). From the Devil's Bridge onwards towards Cwmystwith Mine and Penrebrwianant are Bodocil and North Hafod. The next we come to is the Great Cwmystwith Mine, and adjacent thereto and to Penrebrwianant there are several small mines, worked principally by local capital, and by miners on their own account. Further west, down in the valley of the River Ystwyth, are situated the ancient mines of Grogwion; and between Pontrhydygroes and Ysptyt Ystwyth are a group of mines together, which, with the Fronogoch, form the Lisburne Mines—i.e., Logauas, Glogfach, Glogfawr, and Hafod Gau, &c. In the same locality, also, are situated the South Lisburne, Pontystwith, Llwyn Mwn, Llwyn Llwyd, Bronherlan, Brynhoer Mines, Llwyn Malys, Hendrefelen, and Bron Caradog. Several of these mines, which are now lying dormant, are capable of making good returns if worked judiciously, with a fair amount of capital, and would send (as those do now that are working) their produce to the nearest shipping-port—i.e., Aberystwith. In Dyffryn Melldro (a parallel valley northward with the Rhedol Valley), we have Gwida, Cefnucinoed, and the Great Goginan Mines. Eastward of these are Clara United, Ponteryd, the Bog Mine, and several others whose names at present have escaped my memory. North of the Goginan there are a great many rich and valuable mines, which are making, or capable of making, large returns—i.e., Darenfawr, East Darren, South Darren, Cwm Eryn, Cefn Brywyno, Bronfild, Blaen Brywyno, Court Grange, Gwar Cwmbach, Hafan and Henfich, Eaglebarrow, Bwist, and Camdwr Mawr, &c. All these mines, I believe, invariably send their ores for shipment to Aberystwith. Northward, again, of these mines are the Esgril Hir, Esgril Fraith (Welsh Potash), Mountain Lake, Blaen Ceulan, Penpontbren Mines, Tal-y-bont Mines, Silver Bank, Pwll Romans, and Llancynfelin. These mines, I believe, send their ores for shipment to Aberdovey, as do also the Dyffil, Cae Conry, Dyffwngm, Rhoswyddol and Bacheliddion, Ceulan, &c., in the Machynlleth district. There are some lead mines in the neighbourhood of Aberdovey, together with the slate quarries of Aberllynfi, Coris Bryneglwys, and others, making Aberdovey their shipping port.]

## CENTRAL SNAILBEACH, AND GREAT LAXEY AND SNAEFELL MINES.

SIR.—At the general meeting of Central Snailbeach, on Jan. 31, Mr. Noble took the opportunity to congratulate the directors on the great satisfaction and confidence they had given to absent shareholders by investing the surplus capital in Exchequer Bills. Several of the shareholders in Great Laxe, who were present, approved highly of the matter being brought under their notice, and asked why it was that the directors of Great Laxe and Snaefell Mines did not adopt a similar course, with a large amount of capital in their hands which cannot be required for a long time? This is a question the shareholders are becoming very anxious about; and well they may, when they take into consideration the reply given by the Chairman to one of their body at the last Snaefell meeting, to the effect that it is no concern of the shareholders, but entirely the business of the directors. The amount of capital in cash for working Snaefell Mines was 10,000*l.*, and although the monthly cost only averages about 1,000*l.*, the whole of the large balance remains in the hands of the company's bankers, not the slightest attempt having been made to invest a single shilling of it, and in the last six months' accounts not a single penny is credited to the company on account of interest, although the cash balance at the bank was no less than 589*l.* 14*s.* 7*d.*

A SHAREHOLDER IN THE THREE MINES.

## DYFFNGWM MINE, AND ITS MANAGEMENT.

SIR.—"Ex-Officio." In his correspondence in the Journal, some few months since, relating to the management of this mine, informed his late co-directors that the washing of the ore was most imperfect; so also did Capt. John Pault, and so said Capt. Ridge and Ball, when they made their reports; but "Ex-Officio's" statement was at the time indignantly, nay even insultingly, denied by the late manager, which denial was supported by a few large shareholders, to the prejudice of the minority in shares, but not the minority of persons. In the Welshpool and Newtown newspaper of last week I observed a report from Mr. Inspector of Fisheries under the Crown. This report is addressed to the Commissioners of the district in which Dyffngwm Mine is situated. He goes on to say, "That on Nov. 26 last he visited the River 'Dyffngwm,' or into which the Dyffngwm washings empty themselves, and that he found the settling pools of the mine were very small, and only two in number; that these were full of settled matter; that the slime was running into the river as it came from the workings; that there was not a particle of vegetation in the bed of the river, or on its banks within water line for four or five miles down the river, all being burnt up, from the deleterious matter thus running into the water." Does not this make good what "Ex-Officio" told his brother shareholders, and is it not another proof that the losses of the mine are influenced by such an irregularity? How is it, Sir, that the respected Chairman of this mining company is so hoodwinked by the officials, lending his great support passively to this, and other startling complaints of mismanagement? The dressing costs of the ore returned as sold this quarter, ending Dec. 31, is over 2*l.* per ton!

Feb. 2.

SCRUTATOR.

## EAST HOLYFORD MINING COMPANY (LIMITED).

SIR.—In your Notices to Correspondents of the 2d inst., "A Shareholder" observes respecting these mines, that he would advise the continuation of the works if they were likely to be remunerative, and of that the agents have given a favourable opinion. As one of the agents, I beg to reiterate the opinions I have previously uttered, and feel convinced that the project would have been a great success, the earnest of which would seem to be dawning on its next neighbour, the Old Holyford Mine, which, although only lately recommenced, is raising considerable quantities of rich copper ore, and will make a profit of more than 1800*l.* for the last six months, and will soon become a dividend mine. The capital left will not be quite enough to execute all the necessary works proposed; the late unfortunate proceedings, in which the money was not applied to the mine, or the adventure in any way prosecuted, save for the preliminary works, should not be taken as any proof or presumptive argument against the value or standing of the mine itself. It is most unfortunate that such a fine property should have fallen into such straits by sheer mismanagement, or some other thing worse, in the promoters thereof. Had half the money subscribed found its way to the mine there can be little doubt the promises made would have been fulfilled. Already the property has been examined and reported on for parties who will, no doubt, profit by the outlay already made by previous companies; a small *bona fide* capital and short time only will be requisite to make this an excellent property.

P.S.—A meeting of the proprietors will take place on Wednesday, the 13th inst., and I hope these remarks will be considered by those most interested.

## THE FRONTINO AND BOLIVIA GOLD MINING COMPANY (LIMITED).

SIR.—You did me the favour of inserting a letter respecting this company in last week's Journal; since then I have received letters from New Granada, rendering it imperative that a meeting of the shareholders should be held, if they would save the remnant of the property and the uncalled-up capital. I need only say that a portion of the information conveyed is to the effect that the Frontino Mines have ceased working, and the mining staff removed to Bolivia, and Capt. Tregoning is on his way to England. I take this opportunity of informing the 53 shareholders who have addressed me on my letter inserted in the Journal of the 2d inst., that I shall have much pleasure in replying to them as soon as time will permit.—*Park-road, Brompton, Feb. 8.*

J. HARRIS.

IRON SMELTING IN FRANCE.—The furnaces are square in external plan, which is a more usual form abroad than in England. They are 48 ft. high, 16 ft. wide at the boshes, and 11 ft. at the throat. The air is delivered to each of the tuyeres at a temperature of 400° Centigrade. The gases are taken off effectively from all. Some of the older ones are closed with a lid, raised by a counterpoise, but the cup and cone plan has been adopted in most instances. In all, the sheet-iron tubes of material come over the mouth of the furnace and drop their contents in. The Mazenay ore requires no flux, as it contains abundant carbonate of lime, and the ordinary charges, when working with it alone, are 1700 lbs. of coke to 2000 lbs. of ore. The mixtures and management of the ores for the higher brands of iron are various. Some systems which have lately been elaborated are undoubtedly valuable to the owners of Creusot, though they could not benefit the other forgemasters who have not the same varieties of mineral to deal with. The other forgemasters take place every eight hours, when about 8 tons are run from each. The slag is run in a thin sheet over the floor, and then broken up and loaded in the railway wagons by hand, which is a defective arrangement compared with nearly all others in the world. The gases are utilised to the utmost. They heat the blast and supply the boilers of the blast-engines, and there is plenty to spare for sandy other boilers in the foundry and engine shops; and it is expected that all the engines in the machine shops will be driven by steam thus raised, including some new boilers now in contemplation to replace others of old construction.—*The Engineer.*

Creditors of the East Indian Coal Company (Limited) are required to send the particulars of their claims to Mr. C. G. Carttar, the Liquidator, by the 28th February.



## Royal School of Mines.

## MR. WARINGTON SMYTH'S LECTURES ON MINING.

LECTURE XXVI.—It is necessary to be prepared, in driving levels, to meet with points of interruption, especially with reference to the direction which ought to be taken in seeking deposits which have been lost. Thus, if we drive a level from a shaft in a given direction, and find, after a while, that the vein is running into bad material, and then afterwards is cut off, there would come into play the rules he had given before as to the angle on which they ought to look for it again. But there are other obstacles found in metalliferous mines, from which stratified deposits are tolerably free. In the latter it is pretty certain as to the nature and locality of interruptions, but in metalliferous mines there are all sorts of bars to straightforward progress. It frequently occurs that we come down to a part of the mine where the men ought to be driving in the lode, but where it has disappeared, and they do not know whether they are driving in the lode or in the country. Various forms of this difficulty are constantly occurring to experienced miners, and the judgment of the manager of a mine. In some cases the manager may set himself right by the compass; but in others it may be necessary to make a cross-cut on the one side or the other. Sometimes they may come to a "dead end," and then it will be necessary to look back and examine the walls of the level in the most careful manner, to see if it is the lode which swerves away from the direct line, although in that case the lode very frequently rights itself, so that it is necessary to keep the level straight on. Nothing is more common than to find something which looked like a lode gradually die out to a string, and then they would have to look back to where, as the miners say, "it dies away in the country," and then search for the true lode. Again, it is not an unfrequent occurrence, especially in large lodes, that it is necessary to make cross-cuts in the lode, to test the ground right and left, and see whether another part of the lode may not be of a more productive character. This peculiar character of the ore part of a lode is known in Cornwall by what the miners term "splices," and these are cases which should never be neglected. The lodes in instances of this kind gradually die away; but at the same time another branch, as it were, at a different point parallel or nearly parallel, with that which the lode is losing, which in a short time may become as rich, or richer, than the one lost. A single cross-cut of 8 or 10 ft. may thus enable the miner to take up the new lode where the old one left off. A circumstance of this kind indicates generally that the ground is of a character in which a repetition may be expected, and great care is, therefore, required in watching for such indications. In the Old Holmshill lode there are frequent examples of this kind of fault. Another variety of circumstance is the occurrence of soft veins, when it will be found that the miner so much more fathom, but so much per ton for the ore got out. In cases of this kind it is often necessary to carry the levels in the country beside the lode, and then great care must be taken that the lode be not lost at the point of junction, where it probably will only appear in the form of mere strings. The truth is that in many cases, although the lode itself and the country in its neighbourhood are subject to changes of more or less magnitude, those changes very frequently partake of a corresponding character. Thus, supposing we have worked out a 20 fathom level, and we shall find, when we come down to 30 fathoms, our past experience stands us in good stead as to the character and position of interruptions. It should also be remarked that winzes for ventilation, which are absolutely necessary, may often be managed so as to serve the purpose of cross-cuts. Mr. Smyth, then, by drawings, described a variety of cases in which they had been abandoned as unproductive, had been taken up again, and within the same lode exceedingly productive and remunerative portions had been found; and then passed on to the modes of securing the roofs and sides of levels and horizontal passages. He need scarcely enlarge on the necessity for doing this. There were, it was true, mines in which very little timbering was requisite, on account of the hardness of the ground, and where, if they drove through granite or hard killas, cross-cuts would stand for 100 years, but in the lode the hardest material was apt to come away at the different joints. In most mines, however, it was necessary to adopt special means of support, partly for the security of the workmen, and partly to keep open the thoroughfares. Indeed, in some places, where the roof is of a shaly character, and especially if it is wet, the men cannot work in the advance for more than a few feet, and sometimes only a few inches. The sides and floors, also, often require to be secured from the pressure resulting from the natural tendency of material to obey the laws of gravitation. Of the various means applied for this purpose, timber has many advantages, and amongst others it can more easily be prepared above ground and carried into the mine, and because it can, as a rule, be applied at a smaller charge than masonry. When, however, timber requires to be frequently replaced it becomes a serious charge. It is important in calculating the chances of success to take into account the quantity of timber likely to be required, and it may be that this expense in some districts will make all the difference between paying and not paying. He had known instances where the timbering cost is, per ton on every ton of mineral which was raised from the mine, whether it was worth little or much. This was one cause why we could work our collieries so much more economically than they could in the North of France or Belgium, or elsewhere on the Continent, where the cost of timbering was two, three, and often four times as much per ton of mineral as in this country. In regarding the comparative qualities of timber for the different purposes, it is to be noticed were strength, resistance to decay, and price. Considering the strength of timber it must be remembered that it is applied in very different ways—sometimes as single props, as in the long wall system; at other times when it has to resist pressure transversely to the fibre, and at others to resist a strain both ways, having a tendency to pull the fibre asunder, as in the case of pump rods. One kind of timber then, it is obvious, is best suited to a particular kind of work, and another to another. With regard to cost, it is impossible to say anything generally. In the Harz, where the mines are in the midst of pine forests, timber is obtained at an easy rate, and of an admirable kind for the purpose. In Cornwall, where there is but little timber, that defect is supplied by a good seaboard; and Baltic timber, which stands excellently, is obtained at a moderate cost. In other countries, as in Spain, for instance, it has to be conveyed considerable distances at a great cost. Generally speaking, districts which have a seaboard enjoy great advantages. Thus, in Cornwall they would use Spanish chestnut timber from Portugal, and in the Harz they would use the German *stahl*, a piece of carpentry. The Scotch Fir (*Pinus sylvestris*) ought to be called Baltic timber, as the wood known by that name comes from Memel and Riga, while that which is grown in Scotland is very inferior, and of quite a brittle character compared with the other. The Silver Fir (*Pinus abies*) is a beautiful tree, but does not furnish so good a wood as others of the family; but where readily obtainable is frequently used, as in the Harz. Oak is also largely employed, and possesses in an eminent degree the qualities of strength and durability, but it is too expensive, and especially so if the levels are large. In thin seams, where it can be employed as props in short pieces without much cutting and shaping, it is very useful, and lasts ten to one better than the *coniferæ*. Larch holds its own very well against Oak, but the others are not to be compared in durability. BEECH and BIRCH are employed in some countries, but they are more brittle than the *coniferæ*. In the South of Europe SPANISH CHESTNUT is much used, and lasts remarkably well. It is also employed a good deal in America. In some parts of Italy, and in the South of France, the *Acacia* is used, and it is spoken of as being the best of all kinds of wood for strength and durability. Generally speaking, then, it may be taken that in the Northern countries Larch and Baltic timber are mostly used; while in the case of small workings Oak branches are very serviceable. Single props are more used in collieries than in metalliferous mines. If the roof be free from fissures these props are put in in alternate rows, thus:—. If it be apt to break, or has transverse fissures, it is necessary to put in headpieces or caps at the summit of each prop, or extending over several. These props are put in while the pillars of coal are being removed, and then the props are recovered, and the roof falls in. The miners think it a point of honour to recover the whole of the timber as they advance, and as they are besides paid extra so much per prop for all that are got out, they are often so extremely daring as to go where the roof is literally falling all about them. The way these are usually got is to dig around the foot, and to pull the bottom of the prop away with a chain attached to a common jack. Sometimes iron is used for props, as at Lord Fitzwilliam's mines, but it is too expensive a material to become fashionable. In metalliferous mines single props are often placed at right angles to the walls, and they are some times obtained by planks, when they are called stulls (from the German *stahl*, a piece of carpentry). A couple of years ago he was present at the opening of an old tin mine at East Lovell, in Cornwall, where he saw a curious example of the old miners' mode of timbering. The lecturer concluded by exhibiting a model of it, and also of the simple frame work called by the Cornish miners *stulls* and the French *cadre*.

LECTURE XXVII.—Having thus placed before the students a few of the simplest modes of securing the ground by timbering, he proceeded to a further consideration of the subject. When the levels are small, and merely for exploratory purposes, or for military mining, or ordinary work near the surface, it would be sufficient to protect the ground at the roof and sides with plank timbering, and sometimes the floor also, if for nothing else than to run the barrows on it. This, of course, would be very insufficient in the deeper workings of mines, for then a all lode, they must avail themselves of the ground immediately over the heads of the men as they advance, and then drive the ground into the going into that part of the subject, he wished the students to look a little more closely at the mode of fixing the side pieces, or legs, to the top or cap. In some mines round timber is employed, but whether round or square the principle was the same. In coal pits near the Mendip brushwood is put over the caps, and it is called "rice," which, no doubt, is useful to equalise the pressure. The mode of fixing the cap depends a good deal upon the pressure on the roof, which renders it necessary to be careful not to throw out the legs very far from the perpendicular. The problems resulting from vertical pressure, however, comparatively easy, when compared with those which result from lateral or transverse pressure, and he drew a great number of diagrams to explain and illustrate the treatment each one required. He next proceeded to mention the cases in which the workings are of large size, and the timbers are required to be of unusual strength. Sometimes massive cap pieces, 10 to 14 in. square, were employed, and at others round timbers of 18 in. diameter, and 20 in. long, were used. A very notable piece of work of this kind had been carried out in the Botallack Mine, to which the Prince and Princess of Wales owed their safety when they visited it. That work was one referred also to the remarkable timbering of the Devon Great Consols Mine. Near the Anna Maria shaft there was a sill-piece of red pine, 36 ft. long and 22 in. square, upon which was placed a triangular structure of timbers from 18 ft. to 24 ft. in length and 20 in. square. He did not know in Europe any timbering to compare with this for largeness of scale, unless it was a shaft in the Harz, to which he had referred in former lectures. And there was a remarkable example also at the St. John del Rey Gold Mine, in Brazil, where still pieces were put in

of extraordinary thickness, arresting a movement of the ground which at first seemed impossible to be resisted. In dealing with rocks exposed to the action of the atmosphere, and liable, therefore, to oxidation, which caused great pieces to be detached from them, if a level were left for a considerable time it would be found very much smaller in size than when it was first opened. In such places, and particularly if water falls upon it, the lasting power of timbers rapidly diminishes, and they are soon broken and burst in. Indeed, works have been known to be so closed up as to present to the subsequent explorer the appearance of unopened ground. It had happened to himself to be in a level driven in what appeared to be untouched virgin ground, where the workmen came upon a piece of timber, evidently a portion of a former level, and the skeleton of an old miner, but all so pressed together as to appear to be one mass. For the purpose of dealing with these great pressures elliptical frames have been adopted of solid timber, put together in pieces 6 ft. in length. Another method has sometimes been adopted—that of cutting the timber into short blocks 2 ft. in length, and building them together, as it were, like stones. This was a costly method, but was found to have a great amount of strength. It was nothing else, in fact, than an application of the method of securing shafts called "tubbing."

INSTITUTION OF CIVIL ENGINEERS.—At the monthly ballot, on Tuesday (Mr. Charles Hutton Gregory, Vice-President, in the chair), the following candidates were duly elected, including fifteen members:—Mr. Charles Bernard Baker, resident engineer on the Midland Railway Extension to London; Mr. Henry Baylis, borough engineer, and engineer to the Corporation Waterworks, Bolton, Lancashire; Mr. Michael Beazeley, assistant engineer on the Wolf Rock Lighthouse Works, Cornwall; Mr. James Bolland, Westminster; Mr. William Crozier, engineer to the county of Durham; Mr. James Deas, engineer of the western division of the North British Railway, Glasgow; Mr. Thomas Leed, Mr. Daniel Gallagher, cross, Dublin; Mr. John William Grover, Westminster; Mr. Henry Law, late of Rio de Janeiro; Mr. William Lawford, chief assistant engineer to the Great Western Railway; Mr. George Owen, engineer of the Cambrian Railways; Mr. Charles Robins, Westminster; Mr. Francis Stevenson, principal assistant engineer of the London and North-Western Railway; and Mr. Thomas Jefferson Thompson, principal resident engineer and locomotive superintendent of the Bahia and San Francisco Railway; and seventeen associates:—Mr. William Henry Howell, Midland Railway Extension Works, Camden Town; Mr. Joseph Parkin, Colborne surveyor, the West Hove District Commissioner, Brighton; Vice-Admiral George Elliot, Warwick-square; Mr. William Francis, Westminster; Mr. John Clarke Hawkshaw, B.A., New Dock Works, Hull; Mr. Follett Charles Hennet, Ironworks, Bridgewater; Mr. Harry Pasley Higginson, Madras Irrigation and Canal Company; Mr. John Howkins, jun., Barrow Dock, Barrow-in-Furness; Mr. George Albert Hutchins, Carnarvon; Mr. Charles Edward Mackintosh, Railway Foundry, New Cross; Mr. John James Myers, jun., Preston, Lancashire; Mr. Charles O'Neill, resident road and bridge engineer, Wellington, New Zealand; Captain Robert Robertson, R.N., Board of Trade; Mr. Alexander Clunes Sherriff, M.P., Westminster; Mr. Henry Thomas Tanner, Newbury; Mr. Charles Brown Trollope, Westminster; and Mr. William Cawthorne Unwin, B.Sc., Homerton College.

SOCIETY OF ENGINEERS.—At the meeting, on Monday (Mr. W. H. Le Feuvre, President, in the chair), the following gentlemen were elected members:—Thos. Dale, Queens-terrace, Old Ford-road; Wm. Hack, West Middlesex Waterworks, Hampton; Wm. A. Lyttle, Priam-place, Hammersmith; F. Chadwick, Westminster Chambers; J. Roake, London-street, E.C.; T. A. Large, Chandos Chambers, Buckingham-street; E. D. Etlinger, Millbank-street, Westminster; R. E. Johnston, Engineers' Office, Shrewsbury;—Associates: R. C. Grant, Victoria-road, Kensington; H. Maltravers, Dogwater-hill; R. H. Foreman, Woodside Elmstead, Calesburg; H. J. Cole, Marylebone-road; W. L. Domes, Dorset-place, North, Clapham-road; J. Balnbridge, Colsters, Temple; William Smith, Northumberland-street, Strand; H. Carnsey, Parliament-street; E. J. Mayhew, Great George-street; E. Downs Hill, Lombard-street; Mark Manley, St. George's-road, Regent's-park; J. R. Hatherley, Great George-street, S.W. A paper "On Safety Valves," by Mr. Thomas Baldwin, was read and discussed.

ON THE COMPOSITION AND DURABILITY OF LOCOMOTIVE BOILER TUBES IN REFERENCE TO COAL BURNING.—At the Institution of Mechanical Engineers' meeting, at Birmingham, Mr. G. A. Everitt, of Birmingham, read a paper on this subject. The question of coal burning in locomotive engines, and its connection with the durability of the tubes, although one upon which there has been a great diversity of opinion, has drawn attention to the importance of ascertaining the best alloy of brass for the tubes, and also to the necessity of overcoming the difficulties so often experienced from the copper fire-box plates being of hard or brittle quality. A simultaneous deterioration has also been noticed in the quality of the copper sheathing of ships' bottoms, the durability of which at the present time is far inferior to what it was several years previously. The explanation in each case appears to be that the quality of copper known as best selected, which is obtained by skimming off the upper surface or purest portion of the melted metal in the smelting process, has of late years been so much in demand, that the skimming is now carried too far; whereby the cake copper left behind, from which the copper fire-box plates for locomotives and the sheathing for ships' bottoms are made, is seriously deteriorated in quality. Recently a system of testing the best selected copper has been introduced with advantage by the Admiralty, and also adopted in the manufacture of locomotive tubes, a prescribed alloy of the copper with zinc being required to come up to a fixed standard of tensile strain, and to exhibit a fracture presenting a silky appearance in texture, which cannot be obtained with any but a superior quality of copper. The practice has also been adopted for several years on the French railways, and to some extent in this country, of employing an alloy of brass for the boiler tubes containing a higher proportion of copper than formerly, which is believed to be beneficial as regards the durability of the tubes, particularly in resisting the action of sulphur in coal-burning engines with bad coal. The increased ductility arising from the larger percentage of copper may be expected to admit of some reduction in the thickness of tubes, and consequently in their first cost, without diminishing their durability; and the thinner tubes, offering less rigidity, will have an advantage in reference to the difference of expansion between the iron boiler shell and brass tubes of locomotive or marine engines. Specimens were exhibited of brass boiler tubes flanged over cold, to show the ductility of the metal containing the higher proportion of copper now employed for the purpose; and also samples of the standard test bars that had been subjected to the prescribed test of tensile strength, and showed the required silky appearance in the fracture when broken across.

MECHANICAL TREATMENT OF ORES.—Reference has been made in the *Mining Journal* upon several occasions to the improved dressing machinery of Mr. JOHN HUNT, of Porthleven, who has now published a pamphlet, treating generally of the dressing of ores, with especial reference to the machine in question. Most experienced men are aware of the fact that although, as a rule, in working mines no expense is spared in employing competent men, and using the most economical machinery to be obtained, yet after the dressing and crushing of the ore is left to the caprice of those whose practical experience has never attained that perfection necessary for a good ore-dresser; and the employment of proper machinery in this department is, with some, quite a secondary consideration. Indeed, this branch of mining may be said to be a science of itself, both as regards the washing and the state of fitness to which the ore should be reduced, by crushing or stamping, before it undergoes the process of washing. The great and desirable object in the crushing and stamping of all kinds of ore is, as much as practicable, not to reduce it finer than is necessary to separate the ore from the matrix. If, for instance, an ore of copper, lead, or any other metal, is disseminated in the matrix, like grains of quartz or feldspar in granite, such ore, in the first place, should not be crushed finer than would pass through a sieve of four linear holes to the inch; if the ore is more solid, its being crushed to pass through a sieve of three linear holes to the inch would be preferable; in fact, the less solid pieces of ore are reduced before the crop, or rich part, is taken out, the better, as by the most complete and careful treatment fine ore will escape with the water, as a by-product, on account of its being easily reduced to powder, should be avoided as much as possible; it is better to lose 1/2 per cent. in the rough waste than lose 1 per cent. in the slimes. The details of the construction and mode of using the machine are given in the pamphlet; and from the fact that its author recovered about 800,000 lbs. worth of silver, lead, and zinc from refuse previously passed by as useless rubbish his opinion to, at least, impartial consideration.

COAL IN NATAL.—A highly bituminous coal, which burns readily, makes excellent fires, and cokes well, is found to occur in seams over 6 ft. thick, alternating with beds of shale, at a distance of not more than 150 miles from Port D'Urban. There is every facility for the construction of a railway from the coal field to the port, when the coal could be supplied in almost unlimited quantities at 11 per ton. The coal appears to be of oolitic formation, and extends over a very large area. It is suggested by Dr. R. J. MANN, who has been appointed Natal Commissioner for the forthcoming Paris Exhibition, that some gentlemen of known character, ability, and technical experience should be employed to make a geological survey of the field, and to determine whether the deposit is continuous; he is sure the Colonial Government would be eager to bear its full share of the small burden necessary to carry out the investigation. In addition to coal, there is a fine deposit of limestone near the southern frontier of the colony, extending over an area of 20 square miles, and presenting specimens of almost Carrara excellence. Both the coal and the limestone will be exhibited at Paris.

COAL IN AUSTRALIA.—In the Australian Agricultural Company's report, for the meeting on Tuesday, the directors regret that there has been no marked improvement in the out-turn of the colliery, though it is less unfavourable than during the first nine months of 1865. The cost per ton was reduced, but the saving was nearly absorbed in the reduction of price; on the other hand, there was a large increase in the quantity sold. The figures are as follows:—

	1865.	1866.
Quantity.....Tons	79,555	79,682
Average cost per ton, large and small.	7s. 4 1/2 d.	6s. 8 1/2 d.
Average price per ton, large and small.	7s. 11 3/4 d.	7s. 5 d.

The amount of profit realised in the two periods was 4469l. in 1865, and 5509l. in 1866, subject in both cases to a reduction of 2060l., being three-fourths of the sum annually written back to capital out of revenue, to replace the outlay of previous years. There is, however, some prospect of improvement. After years of fruitless and wanton rivalry between the companies they have agreed to a schedule of prices. In the case of those whose coal is of equal quality, a rise of 1s. per ton above the prices which have ruled throughout the greater part of 1866 has been agreed to, and as the total vend of these companies is not far short of 500,000 tons, this moderate advance upon previous rates will increase the aggregate receipts by 25,000l.

Mr. Richardson is now engaged in the factory department of Woolwich Dockyard, with the Admiralty port steam boiler, which he has been permitted to use until Tuesday next, in order to exhibit his process of employing shale oil, created by the burning of shale, and burning water gas, so as to evaporate with 1 lb. of oil from 16 to 20 lb. of water. The boiler is in full operation hours each day, and many scientific persons are in daily attendance.

## Meetings of Public Companies.

## LONDON AND COUNTY BANK.

The half-yearly general meeting of shareholders was held at the London Tavern, on Thursday,

Mr. H. C. E. CHILDERS, M.P., in the chair.

Mr. CLAPPISON (the secretary) read the notice convening the meeting. The report of the directors appears in our advertising columns.

The CHAIRMAN said it now became his duty to move the reception and adoption of the report. This was the first time he had had the honour of appearing before the proprietors as the Chairman of the meeting, and therefore, he claimed their indulgence for any deficiencies that might arise. There were two special subjects to which he had to refer upon the present occasion—one was with respect to the business of the year, but more especially to that of the last half-year, and the other was with respect to the augmentation of the capital. In August last his colleague congratulated them upon the state of the business of the bank in the financial crisis, and he (the Chairman) now, at the end of the year, might renew those congratulations (hear, hear) for the bank never stood in a better position than it did at the present time. (Hear, hear.) A reference to the balance-sheet would show that the amount due by the bank for customers' balances, &c., was 12,057,000l.; last year that item stood at 11,843,000l.; therefore, in spite of the financial crisis, the bank's balances were higher than this time last year, and higher than they had ever stood since the bank was established. The liabilities on acceptances amounted to 1,850,761l.—that item varied from time to time, according to circumstances, it had been as high as 3,000,000l., and as low as 1,000,000l.; it was now 1,500,000l. He believed he was right in saying that the bank had never lost one shilling on its acceptances. Upon the other side of the accounts, he would first call attention to the reserve which the bank had for its business, adding the cash on hand at 3,200,000l.; last year it was 3,900,000l., an ample amount to enable the bank, without difficulty, to meet such a crisis as that passed through last year. If that was ample when the Bank rate of discount was at 7 per cent., it no doubt was ample when the rate was at 3 per cent. With respect to the Government securities, this item did not stand at quite so high a figure as it did last year, but even since the date of the accounts the item had increased. As to discounted bills and advances to customers, he might say that, while the directors were careful in making advances, they were liberal to their customers, by which they deserved that good character they had obtained in the City and at their country branches. The freehold premises were valued at 176,313l. There had been an increase since last year of between 30,000l. and 40,000l.; the premises were much undervalued. As to the profit and loss, the gross profit for the half-year, after making provision for bad and doubtful debts, was 319,957l. This was not quite so much as had been shown in some previous half-years; in one, he thought, it amounted to 340,000l. When they considered the circumstances of the past year they could not but deem the profits gained as being most satisfactory. While it was the duty of the directors every year to be most careful in scrutinising every item in the accounts, so as to make ample provision for every possible contingency, but after such a year as that just passed through, that duty was of a more marked character, and, therefore, the directors had taken great precautions to see that the amounts set aside should leave a good margin, after, in the words of the report, "making ample provision for bad and doubtful debts." (Hear, hear.) The salaries and all other expenses at head office and branches, including income tax on profits and salaries, were stated at 99,813l.—that was somewhat in excess of the amount last year, which, he thought, was 90,000l. The increase was the result of a very careful periodical scrutiny by the directors of the salaries paid to all the officers. He was sure the generosity of the shareholders would not regret that considerable increase in their expenses. (Hear, hear.) There was one item in connection with the expenses of the bank to which the attention of the proprietors, and also of bankers generally, should be drawn—he meant the expense entailed upon bankers through light coin passed through their hands. Having been connected with the Treasury, this was a subject which had special interest to him. He found that the loss during the second half of 1865 from light coin was only 1100l.; and during the first half of 1866 it was 2300l.; but during the second half-year it amounted to 4300l. That increase might appear very large, but the increase of the business was also very large. Shareholders might possibly be surprised to know that, during the last year, there was passed at the head office, in Lombard-street, an amount in gold and silver amounting to no less than 8,463,000l., of which 6,400,000l. was remitted as surplus coin from their several branches, and about 2,000,000l. paid to the public. He believed that showed a business almost unprecedented in banking, and in some measure accounted for the increase of loss by light coin. At the same time, however, he claimed the special attention of all bankers, and he thought before long it was a subject which should be brought before the Government of the country. (Hear, hear.) As to the increase in the number of the accounts, he had the satisfaction to state that while at the end of 1865 the number of accounts was 47,685, and in June 48,634, at the end of 1866 they amounted to 50,389. He believed that was a very good test of the progress of the bank both at head quarters and at the branches. (Hear, hear.) As to the proposed increase of capital—it was unnecessary for him to justify that increase, because six months since the proprietors formally approved the recommendations of the directors, that the capital should be increased. Precedence had shown them that an increase of their capital had brought them an increase of business, and he alone justified the proposed increase from the sum of 750,000l. to 1,000,000l. In 1862, when the capital was increased, the balances sprung up from 6,483,000l. to 7,750,000l., and so on gradually until they had reached over 12,000,000l., therefore a corresponding increase might reasonably be expected even in the present year. (Hear, hear.) One of the reasons of an increase of business resulting from an increase of capital was this, that although the shares were issued *pro rata* among the existing shareholders, the number of shareholders was ultimately augmented, and thus, so to speak, they broadened the base of the company. There were brought an increase of business. There were now 37,500 shares, upon each of which 20l. had been paid, and it was proposed to add to that number 12,500, making together 50,000, and a paid-up capital of 1,000,000l. It was proposed to issue to every existing shareholder in the proportion of one for every three shares held. They would be issued at the price of 40l. per share, half to be carried to the capital, and the remainder to the reserve fund. The amount would be called up in four instalments, at intervals of four months, the first to be paid on March 30. The dates had been so arranged that the instalments would become due just after the payment of the next five dividends. (Hear, hear.) Those, however, who wished to pay the amount at once could do so, under a similar arrangement to that made at the last increase of capital, being entitled to the dividend and bonus as from that date. (Hear, hear.) He thought he had now gone through the principal events in the history of the bank since the last meeting, and he hoped he had made himself clear as to the proposed arrangements for the increase of capital. He concluded by moving the reception and adoption of the report and accounts. He resumed his seat amid loud and continued cheers.

Mr. CHAMPION JONES seconded the proposition. The motion was put and carried unanimously. The motion was then put for the payment of the usual dividend of 6 per cent., together with a bonus of 5 per cent. for the half-year (both free of income tax), and carried unanimously. Messrs. Nathaniel Alexander, Thomas Tynningham Bernard, and Wm. Nicol were unanimously re-elected directors. Messrs. William Norman and R. H. Swaine, were re-elected auditors, and Mr. F. Francis was elected an auditor in the room of Mr. R. Escombe disqualified. A vote of thanks was passed to the Chairman and directors, and also to Mr. McEwan (the manager), the principal and other officers, for the zeal and ability with which they had discharged their duties. Mr. McEwan said he would content himself upon the present occasion by returning, on behalf of the principal and other officers, as well as his own, their warmest thanks for the kind way the proprietors had received the last resolution. Such an earnest was not only a satisfaction to him, but it was a matter of great pride. This was the fifty-fourth meeting of the London and County Bank at which he had the honour of responding to the Chairman (Hear, hear.) The usual compliment to the Chairman terminated the proceedings.

## GREAT NORTH LAXEY MINING COMPANY.

An important meeting of shareholders resident in the Isle of Man was held at the Athole Club-rooms, Douglas, on Tuesday,

Mr. SAMUEL HARRIS, chief-magistrate of Douglas, in the chair.

The object of the meeting was to receive the report of Capt. Kitto, of Snailbeach, and Capt. Bowden, of Foxdale, who had upon the day previously inspected the mine on behalf of about 20 local shareholders, who a short time since subscribed to procure an investigation into the management of the undertaking and an inspection of the mine. Among those present were Messrs. Adams and Sherwood, advocates, Capt. McGregor, Dr. Wingrave, Lieut. McEwan, Messrs. Wilson, Sherwood, Gelling, Cubbon, Malvy, King, and others.

Mr. R. SHERWOOD observed that in consequence of the depreciated value of their property he had suggested the appointment of some of the local shareholders to seats at the board. He communicated with Mr. Murchison the wish of the local shareholders, and received a courteous reply, but meeting the question by asking what it was in the management of the mine they complained of. This meeting would furnish him a reply. They complained that the real number of the directors or secretary was a paragraph in the *Mining Journal*, stating that a conspiracy was being got up in the island to run down the price of shares; on the contrary, their sole wish was to know why they had gone down. There was another statement, that the shaft was "being sunk at the rate of 2 fathoms a month," which they would now find was quite as untrue as that relating to their conspiracy. He then proceeded to give a history of the company.

Mr. CUBBON read extracts from the reports of the companies that have worked the mine, and of the manner in which the companies had been formed, complaining that the promoters and directors of the present company had greatly diminished their holding, and that the secretary had decreased his from 500 to 5 shares. They complained that the advice of practical men as to the mode of working the mine had not been carried out. All the captains who had inspected said that the only chance of developing the mine was to go deeper, yet the whole work from the commencement of their company to Dec. last was 15 fms. sinking and 98 fms. driving—this is the total result of the expenditure of about 6000l. of capital. The erection of the new wheel, which will cost 1000l., will make a tremendous hole in the remainder of the capital, although that wheel is in no way required for the development of the mine. He was afraid that the result of the enormous expense now being incurred would be the winding-up of the company, another sale, and another harvest for the promoters. He had, moreover, heard of the intention of following the continual advice to sink deep in the new shaft they intend to dissipate the capital on another working—the old north shaft abandoned years ago—admitted to be worthless. The executive appeared to be following the maxim, "Divide and conquer." One shaft does not exhaust the money quickly enough, so they resort to a shallower one. The correspondence with Prof. Warington Smyth was also unsatisfactory. The Professor had gone out of his way to write a letter, defending the management of a mining company, and to give an opinion on the expenses thereof; yet upon being written to for an explanation of the data upon which he formed his opinion, and for a statement as to whether he had seen the accounts, he admitted that he knew nothing whatever of the expenditure charged against the company, but had



From Mr. EDWARD COOKE :—The result of Limited Liability during the short period it has become law has proved very disastrous to a large number of investors who confided in its principles, as may be testified by the whole of our country being packed up with paper companies, some of them worth hundreds, and probably thousands, of persons have been utterly ruined during the last 12 months by investing their savings in those worse than bubble schemes, who would not invest one shilling in our home mines that are worked under the Cost-book System. I would here remark that a mining company, conducted strictly on the Cost-book System, renders its shareholders free from the risk of heavy calls, similar to those sadly experienced by shareholders in defective limited liability companies. In all well-conducted cost-book mines the meetings are held either quarterly or tri-monthly, when the shareholders receive equally divided dividends, so simple that every shareholder can easily understand them, and the shareholders themselves can really become their own auditors. It is only when the Cost-book System is not properly adhered to that irregularities occur, hence it behoves shareholders to see that every account is properly charged at the usual meetings of the companies in which they are interested. If this is properly attended to there need not be any apprehension on the part of any shareholder of his being called upon to pay more than his proportion of the current costs, and he can at any time determine his liability, if he should wish to do so. During the past three months there has been a general fall in the market price of several mines that were unduly depressed during the sale of last year, and among them I may instance NORTH CROFTY and PROSPER UNITED. It was only some two months since that the public were induced to notice the ridiculously low price of the shares in both these mines, since which there has been a steady rise in their price. With regard to PROSPER UNITED, it may not be generally known, but it is a fact nevertheless, that the machinery, &c., on the mine was valued during the worst period of the late panic at 32s. 6d. per share, and that price was to be paid to some shareholders who wished to retire from the company; but what has happened since then? They had their shares restored to the value of £100 each, and the value of the machinery, we are told, is now £100 per ton. The agent, in his rather ambiguous report, that there is a quantity of tin ground that would pay if tin ore was at 75s. per ton, and a considerable quantity of tin of the ground that will pay at the current price of that mineral, and that the mine would give 400l. per month profit, and there are some important points to be developed. Like Baalam of old, I presume he was sent to curse the mine, but his inspection, as will be seen by his report, resulted in the contrary. During the many years I have contributed to the Journal I have never in a single instance inserted an anonymous correspondence, and I therefore feel obliged to notice an anonymous paragraph published in your Journal relative to Prosper United, and its workings. I only do so to ask my readers to remember that the former is lying, with all its extensive machinery, at a profit of several hundred pounds per month; while the latter is working at a loss. At the meeting of Prosper United, to be held on Feb. 26, the shareholders will have a substantial proof of the prosperity of their property in the shape of a dividend of 5s. per share, at least, and with the prospect of a continuance of them quarterly. The present price of Prosper United shares is not equal to the value of the plant and reserves of ore, hence there is a margin for a rise of several pounds







seen no lode taken down in the stopes above the 90 fm. level since last report. The lode in the stope above the 80 fm. level east is worth from 4L to 5L per fm. The lode in the 80 fm. level, west of dump, is 1½ foot wide, composed chiefly of quartz, and is letting out water freely. We have still a large strong lode in the







**PARIS EXHIBITION, 1867.**—In order that all useful mechanical novelties connected with mining and metallurgy, or with the sciences allied thereto, may be fully described in the *Mining Journal*, the Editor has made arrangements to send a special representative to Paris, to make the necessary examination of the machinery, apparatus, &c., exhibited. To facilitate such examination, it is most desirable that exhibitors should supply, as soon as convenient, mechanical descriptions of their inventions, &c., which will be regarded as confidential communications until the articles referred to have been examined. Communications may be forwarded either direct to the Office, 26, Fleet-street, London, or to the care of Messrs. Vimeux, Stouff, and Co., Bankers, 3, Rue Daval (Beaumarchais), Paris.

**RAILWAYS AND MINES.**—The amount of the duty imposed on railway traffic for the year ending March 31, 1866, was £43,023, as compared with £39,332, in the year ending March 31, 1865. This duty is 5 per cent. on the receipts from passenger traffic. The gross receipts of the railway companies of Great Britain in the year ending March 31, 1864, were £2,433,958, and the duty paid by them was £430,865, or 1.3 per cent. on their earnings. The net income of the railway companies in 1863-4 was £1,711,000, so that the duty imposed absorbed 2.4 per cent. of their profits. The increase in the annual value of the mines of Great Britain, comparing 1864 with 1853, was £1,934,000, showing an increase of 68.85 per cent., or 6.26 per cent. per annum. Making a similar comparison with regard to ironworks, we find an increase of £13,000, or 39.92 per cent., or 3.63 per cent. per annum. The mines of the home empire were assessed, in 1853, at £2,809,733; in 1857, at £3,822,369; in 1861, at £4,356,698; and in 1864, at £4,743,406.

**LOCOMOTIVES ON RAILWAYS.**—At the close of 1865 the number of locomotives owned by the 14 principal railway companies of Great Britain and Ireland compared as follows with the corresponding number owned at the close of 1864:—Great Eastern, 374, against 376; Great Northern, 391, against 340; Great Western, 727, against 697; Lancashire and Yorkshire, 414, against 398; London and North-Western, 1251, against 1187; London and South-Western, 219, against 207; London, Brighton, and South Coast, 213, against 203; Manchester, Sheffield, and Lincolnshire, 201, against 179; Midland, 530, against 512; North-Eastern, 769, against 663; South-Eastern, 218, against 214; Caledonian, 363, against 262; North British, 331, against 181; and Great Southern and Western (Ireland), 101, against 100. The total number of locomotives at work upon English railways at the close of 1865 was 5968, against 5708; upon Scotch railways, 1026, against 1072; and upon Irish railways, 420, against 423.

**COAL MARKET.**—The arrivals this week have been considerable, numbering 213 ships. This large supply, and mild weather, rendered a reduction in the price of house coals indispensable, and we quote 1s. per ton lower, at which a large business was done. Hartley's varied but little in price, and have been a dull sale. Hetton Wallsend, 19s.; East Hartlepool Wallsend, 18s. 3d.; Braddell's Wallsend, 17s. 3d.; Gosforth Wallsend, 16s. 3d.; Hetton Lyons Wallsend, 16s. 3d.; Kellie Wallsend, 16s. 9d.; Framwellgate Wallsend, 16s.; 18 cargoes unsold; 90 ships at sea.

The general result of last year's trade showed a considerable increase in the foreign exportation of coal, the main portion of which appears to have gone to French and Mediterranean ports.

**CONTRACTS FOR COAL AND COKE.**—The Admiralty require the supply of 6400 tons of Coal, and 750 tons of Coke, for brickmaking; also 1500 tons of Coal, to be delivered at Chatham.

**EAST WHEAL ROSE CONSOLS.**—As will be seen by the details of the special general meeting (which appears in another column), a resolution was passed, approving the agreement of the vendors to accept a reduced cash payment and a large number of shares. The report of Captain R. Nancarrow, of West Chiverton, was regarded as most satisfactory, and the greatest confidence was expressed in the speedy success of the enterprise. Vigorous operations will be commenced forthwith.

**PROSPER UNITED.**—The general meeting is to be held on the 26th inst., when a dividend of, at least, 5s. per share will be paid, with every prospect of keeping up that amount. We understand that more ore is being discovered than is taken away, while various points are improving, and different lodes will shortly be intersected at several places, where important results may be expected.

**YUDANAMUTANA COPPER COMPANY.**—The Conatto, from Port Augustus, South Australia, has arrived, and brings about 40 tons of copper and 28 tons of ore for this company. The Goolina, from Port Adelaide, now about due, has on board 21 tons of copper and 10 tons of ore, also for this company.

**GOLD MINING IN BRAZIL.**—The news received by the Anglo-Brazilian Gold Mining Company by the last mail is highly satisfactory. It is considered that the new lode in the deep adit cannot fail to result in an exceedingly valuable discovery before long. Insuring for this company as successful a career as that of the St. John del Rey has been. The prospects of the Don Pedro North del Rey are also excellent, the present increasing returns ensuring before long a handsome dividend. Great praise is due to Capt. Thomas Treloar for bringing these two mines into their present prosperous condition, which will, beyond doubt, be permanent.

**MINING AND ITS PROSPECTS.**—(From Mr. Peter Watson's "Weekly Mining Circular and Share List," No. 410, Vol. IX.)—"The Mining Journal" continues active, although values were comparatively depressed some day or two prior to the 'settling day.' This is sure to be the case when such a great advance in prices as those of late recorded has taken place, because while the purchases are made at different periods during 'the account' the sales, or at least a very large proportion of them, are effected, and profits realised, some two or three days only before 'the account'; so that, unless there are buyers of a corresponding amount of stock at that particular period, the inevitable effect must be a decline in market value. These continual fluctuations, however, affect only speculative purchasers—those, indeed, whose operations produce them—but at the same time these variations afford the bona fide holder opportunities of making advantageous purchases. As in the case of the last 'account,' these depressions are temporary in their character, for during the past week most descriptions of shares that are being largely dealt in upon the market have advanced to their former value, and in some cases a further improvement has taken place. The demand that has recently sprung up for dividend and progressive mines has this week been stimulated by a further rise in the standard of tin ores. This steady advance in the price of metals will continue to have a beneficial effect upon the value of mine shares. While upon this subject, I may state what is not generally known to the public; it is based upon information obtained from an old and respected correspondent, than whom no better authority upon the subject can be quoted. He states, 'I still adhere to my opinion that tin will go up this year 20s. per ton; there will be a steady and gradual advance throughout the year.'

**COST-BOOK SYSTEM—RELINQUISHMENT OF SHARES.**—It has been decided by Mr. Registrar Pepps, of the Court of Bankruptcy, that the relinquishment of a cost-book share is not completed until the proportion due from the shareholder to the company has been paid. Mr. Halse (Halse, Trustman, and Birt) tendered a claim on behalf of Mr. Mitchell, Registrar of the Stannaries Court, for unpaid calls, owing by the bankrupt to him as liquidator in the winding-up of several mining companies. Mr. Lawrence (Lawrence, Plews, and Boyer) contended as to the proofs for calls that the bankrupt having, as he alleged, relinquished his shares no calls could be made upon him, but this point was answered by Mr. Halse, on the ground that although in a cost-book mine shares may be relinquished at any time on payment of the shareholder's proportion of the liabilities of the mine at the time of relinquishment, no such payment had been made in any of these cases; and that after the making of a winding-up order no transfer or relinquishment of shares is of any validity. The registrar admitted the proofs.

**TRANSFEROR'S LIABILITY AS A CONTRIBUTORY.**—In re the Contract Corporation (Head's case), a transfer of shares was executed in blank, and afterwards filled up with the name of the transferee, who, however, never took steps to have his name registered, and the name of the transferor remained on the list when the winding-up order was made. It was held by the Master of the Rolls that the transferor was not entitled as against the company to have the transferor's name substituted for his as a contributory.

**CORNISH PUMPING ENGINES.**—The number of pumping-engines reported for Dec. is 25. They have consumed 2108 tons of coal, and lifted 16.0 million tons of water 10 fms. high. The average duty of the whole is, therefore, 51,100,000 lbs., lifted 1 ft. high, by the consumption of 112 lbs. of coal. The following engines have exceeded the average duty:—

Chiverton—Cookney's 60 in.	Millions	57.4
Cargill Mines—Mitchell's 72 in.		57.8
Chiverton Moor—70 in.		56.9
Grange—70 in.		51.4
Great Work—Leed's 60 in.		58.8
North Roskear—Doctor's 70 in.		52.5
South Wheal Frances—Marriott's 75 in.		53.4
West Chiverton—Hawke's 80 in.		61.3
West Wheal Seton—Harvey's 85 in.		63.8
Wheal Seton—Tilly's 70 in.		78.4

## The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, FEB. 8, 1867.

COPPER.				IRON.			
Best selected, p. ton	£	s.	d.	Bars Welsh, in London	£	s.	d.
Tough cake and tile	83	0	0	Ditto, to arrive	6	10	0
Sheathing & sheets	87	0	0	Nail rods	7	0	0
Boils	93	0	0	Do. Stafford, in London	7	15	0
Bottoms	96	0	0	Bars ditto	7	15	0
Old (Exchange)	77	0	0	Hoops ditto	8	15	0
Burra Burra	86	0	0	Sheets, single	9	10	0
Wire	86	0	0	Pig No. 1, in Wales	4	5	0
Tubes	86	0	0	Refined metal, ditto	4	5	0
BRASS.				STEEL.			
Sheets	per lb.	10d.	—	Do. mch. Tynor Tees	£	s.	d.
Wire	9d.	—	— <td>Do., railway, in Wales<td>5</td><td>0</td><td>10</td></td>	Do., railway, in Wales <td>5</td> <td>0</td> <td>10</td>	5	0	10
Tubes	11d.	—	— <td>Do., Swed., in London<td>5</td><td>0</td><td>10</td></td>	Do., Swed., in London <td>5</td> <td>0</td> <td>10</td>	5	0	10
Yellow Metal Sheath. p. lb.	7 1/4 d.	—	—	To arrive	5	0	10
Sheets	7 1/4 d.	—	—	Pig No. 1, in Clyde	2	14	3
SPELTER.				INDIAN CHARCOAL PIGS.			
Foreign on the spot	£21	15	0	In London p. ton	£	s.	d.
to arrive	22	0	0	Do. to arrive	7	0	7
ZINC.				STEEL.			
In sheets	£21	15	0	Do. Swed., in London	£	s.	d.
English blocks	90	0	0	Do. (hammered)	16	0	16
Do., bars (in barrels)	91	0	0	Ditto, in faggots	16	0	16
Do., refined	93	0	0	Do. English, spring	19	0	23
Banca	88	0	0	Do. QUICKSILVER (p. bottle)	6	17	0
Straits	85	0	0	Do. to arrive	6	17	0
TIN-PLATES.				LEAD.			
IC Charcoal, 1st qua.	12	0	13	English Pig, com.	19	15	0
IX Ditto, 1st quality <td>18</td> <td>0</td> <td>19</td> <td>Ditto, L.B.</td> <td>20</td> <td>0</td> <td>0</td>	18	0	19	Ditto, L.B.	20	0	0
IC Ditto, 2d quality	18	0	19	Ditto, W.B.	22	15	0
IX Ditto, 2d quality	14	0	14	Ditto, sheet	20	10	0
IC Coke	14	6	1 6	Ditto, red lead	21	5	0
IX Ditto	10	6	1 12	Ditto, white	27	0	30
Canada plates, p. ton	13	10	0	Ditto, patent shot	23	0	0
Ditto, at works	12	10	0	Do. Spanish	19	0	0

\* At the works. Is. 6s. 1d. per box less.

\* At the works, 1s. 6d. per box less.

**REMARKS.**—The Metal Market has again been rather quiet during the past week, and business has not been by any means active. On Thursday the directors of the Bank of England, at their usual weekly meeting, reduced the rate of discount to 3 per cent. This increased easiness in the Money Market ought to have the effect of increasing business, as it offers considerable facilities for commercial operations, and enables transactions of a speculative character to be carried out without difficulty. We trust that as the spring advances we shall find these facilities are being taken advantage of, and that a much more extensive business is being done in metals than has been the case for some months past. Such, however, has been the great derangement of business consequent upon the unfortunate affairs of last year, that it must necessarily be some time before the metal trade will entirely recover itself, and before we shall again see that continued state of activity and vigour which formerly characterised the metal market. Confidence, however, being now in a great measure restored, we may hopefully look forward to the future, and anticipate that ere long a much more satisfactory state of affairs will be apparent. The continuance of our peaceful relations with all foreign countries, as stated in the Queen's speech, at the opening of the present session of Parliament, is very encouraging, and it is earnestly to be hoped that nothing will arise to disturb that peace, which is so essential to the increase of commerce, the promotion of industry, and the happiness and well being of the community at large. The advances received from India are more favourable, and metals generally are improving, both in price and demand.

**COPPER.**—The market generally has been quiet during the week, and transactions have only occurred to a limited extent; prices are, however, pretty firm at our quotations. In Chili slab a very good business has been done at 77s., and a further advance is now asked.

**IRON.**—In Staffordshire the leading houses are receiving a few orders from large home buyers, and there are also orders coming, but not to a large extent, from the East Indies, Brazil, and the United States, though they are far short of sufficient to keep the works fully employed. In Welsh, a slight improvement has been evinced, and a few orders for rails and miscellaneous descriptions of iron have been placed on home account. It is expected that now a movement for the better has taken place it will be gradually increased. The export trade has been tolerably good, and considerable quantities of railway iron have been shipped for New York, New Orleans, and other American ports. The advances that have come to hand from New York speak of the requirements being heavy, and, doubtless, a good trade will be done in the course of the year, should money to pay for the iron be forthcoming. No change has taken place in connection with the other foreign markets. Pig-iron continues dull. In Swedish iron a good business continues to be done, and prices are well maintained. In Scotch pig-iron comparatively little has been done during the past week, and prices have been more in favour of buyers. The last price received from Glasgow was 53s. 9d. cash.

**LEAD.**—A rather better business is now doing, but still prices are a little easier.

**TIN.**—The market remains without animation. English is obtainable a little under the official quotations. Straits may now be quoted at 85s. to 86s., at which a limited business has been done. The stock in warehouse in London on Jan. 31 was 3168 tons, against 3355 tons same time last year; and the quantity of Straits afloat for Europe is 648 tons, against 1378 tons same time last year.

**SPELTER.**—The market has been quiet during the greater part of the week, and business has been done on the spot at 21s. 15s.; but recently an improvement has taken place, and holders are now asking 22s. for parcels on the spot.

**TIN-PLATES.**—Prices remain steady, with a moderate demand. **STEEL.**—A considerable business has been done in Swedish to come forward. No stock here.

**QUICKSILVER** remains without alteration.

**BIRMINGHAM, FEB. 8.**—Rylands' "Iron Trade Circular" says:—Pigs are more saleable; bars slightly in demand—better feeling in trade generally. Quiet politics alone required to restore confidence.

**Business in the MINING SHARE MARKET** has been moderately active this week, and while some few shares have been flatter, others have considerably improved. Among the latter, Wheal Buller, Retallack, South Herodsfoot, Wheal Chiverton, Chiverton Moor, East Gunnislake and South Bedford Consols, and Great Wheal Vor have been most prominent; while North Crofty, Prince of Wales, Drake Walls, and Redmoor have been quieter. Tin ore, we are happy to say, is up 2s. per ton, and the standard for copper ore is also up 1s., and with cheaper money we look for greater activity in the market. West Chiverton shares have been moderately dealt in, and leave off 64 to 65; Wheal Chiverton shares improved, and leave off 84 to 85. East Caradon, 54 to 6; we stated, after the meeting, that one or two important points would be coming off; but since the meeting we have not been favoured with our usual weekly report. Prince of Wales shares have been flat, through market operations, and leave off 31s. to 33s.; the lode in the 55, east and west, is reported worth 35s. per fathom in the east end; the winze below the 45, just commenced, 9 fathoms east of cross-cut, is worth 25s. per fathom; the stope in the back of the 45 is worth 20s.; 80 tons of ore are ready to be sampled. Carn Camborne, 22s. to 24s.; Chiverton Moor, 6 to 64; Chontales Gold, 24 to 24; Clifford Amalgamated, 64 to 64; Cook's Kitchen, 114 to 124. Great Retallack shares have been very firm, and leave off 47s. to 49s.; on Wednesday a printed circular was sent to the shareholders, to the effect that "the No. 2 lode, north end, was looking splendid, and will produce fully 1 ton of good lead per fm.; the lode south is looking very kindly." East Basset, 20 to 21; East Carn Brea, 34 to 34; East Lovell, 94 to 104. Wheal Basset, 65 to 70; at the meeting, on Tuesday, the accounts showed 97. 18s. 2d. profit on two months, and a balance of 568s. 8s. 1d. in hand. Since the last meeting very little has been done in the bottom of the old sump-shaft, owing to the great influx of water, attributed to the suspension of North Basset. Looking at the mine throughout, the agents consider the prospects certainly cheering. At South Basset meeting a call of 2s. per share was made. The accounts showed 1025s. 15s. 5d.,

The prospects of the mine continue good. Wheal Crebor, 10s. to 12s. 6d.; at the meeting a call of 1s. 6d. per share was made. The accounts showed a balance in hand of 134s. 19s. 4d.; liabilities over assets, 35s. 17s. 7d. One or two points are expected to come off in the mine shortly. East Gunnislake and South Bedford Consols shares have advanced to 24, 24; we referred to the discovery made here a fortnight ago, when shares were at 15s.

Wheal Bullers have been in demand, and advanced to 26, 28. A large stream of water has been cut in the 92, west of Stevens's, but it has not drained the bottom of the 80. The lode in the 80 west is worth 12s. per fm.; the stope in back of this level is worth 20s. per fm. The 80 east is worth 25s. per fm.; the winze under this level 50s. per fm. East Russell, 34 to 34; East Wheal Grenville, 2 to 24; Grambler and St. Aubyn, 5 to 6; Great Laxey, 164 to 17. North Treskerry, 24 to 24. At the meeting, on Tuesday, the accounts showed a loss on two months of 85s. 10s. 2d., and a balance in hand of 724s. 4s. 4d. The ores sold, but not credited in these accounts, realised 1559s. 5s. 8d., and will be brought to credit of next meeting, on April 9. The 120, which has not turned out as expected, has been driven east of Tresdrier's shaft 36 fms., and for the whole distance the lode has been large, and at times worth 1 to 2 tons of ore per fathom; the present end is worth 1 ton, and letting out a deal of water, looking like improvement. The agents are looking for improvements in this level, and, with the rise in the standard, hope to do better for the adventurers this year than they did in the past. Great North Laxey, 14 to 14; Great South Tolgus, 15s. to 17s. 6d.; Great Wheal Vor, 17 to 18; Great Wheal Fortune, 4 to 5; Marke Valley, 44 to 44. Caradon Consols, 10 to 15; a good improvement in the winze is reported sinking below the 80, worth 15s. to 18s. per fathom; in the 90 they are within 2 fms. of cutting the same lode. Great North Downs, 34 to 44. The lode in Sleggen's shaft is worth for length of shaft 60s. per fm.; sinking at 20s., and at the rate of 4 fms. per month; the 70 west, 15s. to 18s. per fm.; the lode west of King's, 10s. to 12s.; the winze in bottom of the 70, 15s. per fathom. Gawton Copper have advanced to 3. The lode has been cut in the 60 cross-cut from engine-shaft over 6 feet wide, worth 6 to 7 tons of copper ore per fm.; the winze below the 50, 7 to 8 tons; the winze below the 50, from old sump, is still worth 8 tons per fm. At East Rosewarne meeting, held on Monday, the accounts showed a balance in favour of the mine of 38s. 5s. 10d. New Seton, 30 to 35; North Crofty, 54 to 54; North Roskear, 10 to 12; Prosper United, 3 to 34; Providence Mines, 24 to 30; Roseward Hill and Ransom, 30s. to 35s.; South Grenville, 9s. to 11s.; South Herodsfoot, 6 to 8. Tincroft, 134 to 144; at the meeting a dividend of 5s. per share was declared. West Caradon, 11 to 12; West Seton, 13s. to 14s.; Wheal Grenville, 21s. to 23s.; Wheal Kitty (St. Agnes), 3 to 34; Wheal Mary Ann, 114 to 124; Wheal Seton, 104 to 114; Wheal Trelawny, 11 to 12. Drake Walls, 22s. to 24s. At the meeting held in Cornwall this day the sett was divided; West Drake Walls, on Prince of Wales lode, being put into 12,800 shares, which are to be allotted, *pro rata*, to Drake Walls holders, on payment of 2s. 6d. per share, to work it.

The market for mine shares on the Stock Exchange has been moderately active during the week. West Chivertons continue in demand at 64 to 65. The recent improvements in the workings are maintained, and dressing operations being vigorously carried on. The meeting will be held about the middle of the month. Chivertons are firmer, at 84 to 85; Chiverton Moor, 6 to 64; Westminster, 5 to 54. Prince of Wales are largely dealt in; the mine is favourably reported on; closing price, 31s. 6d. to 32s. 6d. Great Retallack, 47s. to 49s.; Great Laxey, 164 to 17; North Crofty and Great Vor are firm at quotations, and in demand. In foreign mines a considerable business has been done. United Mexican improved from 14 sellers to 24 buyers, closing firm at 24 to 24. The advances by the last mail are very encouraging, a piece of ground 15 varas long and 1 1/2 vara wide having been discovered, which is very rich for silver. The next advances are, consequently, looked forward to with great interest. St. John del Rey, 53 to 54; Anglo-Brazilian, par to 4; Don Pedro, 4 to 4 prem.; Scottish Mines, 4 to 4; English and Australian Copper, 4 to 4; Chontales, 4 to 4; Pestarens have been offered. Changes in prices of mine shares have been otherwise unimportant.

**IRISH MINE SHARE MARKET.**—The transactions in mining shares during the week have been of a limited character; but, considering this circumstance, prices may be said to have been well sustained. For Carysfort, Connorre, and the shares of the General Mining Company for Ireland there were occasionally enquiries made at slightly reduced quotations, but holders declined doing business on the terms offered. The demand for Mining Company of Ireland and Wicklow Copper shares was comparatively active, and several transactions have taken place at prices averaging last week's quotations, of 18s. 10s. in the case of the Mining Company of Ireland (7s. paid). Wicklow Copper shares have fully realised the figures which we last week named as the holders' minimum price—24s. (2s. 10s. paid). Killaloe Slate Quarry shares (1s. paid) have also been dealt in, and brought 15s., which is a trifling advance on former rates. The reduction of the Bank of England official rate of discount from 3 1/2 to 3 per cent. is not expected to exercise any very great influence on our share market, money having for some weeks past been abundant and cheap enough to encourage speculation, were there not still a lingering indisposition evinced by the public to make selection for investment.

Last week we reprinted an extract from our quarterly reports of the Swansea and Cornish Ticketings during the seven years from 1859 to 1865, both inclusive, showing that during that period the produce from the two leading Irish mines nearly equalled that from the THREE most productive Cornish mines. When space permits us, we may make some comparisons for the year 1866, preparatory to which we here append an extract from our quarterly reports on the sales of Irish ores at Swansea during the last four quarters:—

	Tons.	Amount.	Total tons.	Amount.
Berehaven—March, 1866	1209	£ 9,579 13 0		
June, ..	13,061	14 0	4941	£25,605 15 0
Sept., ..	866	5,584 11 6		
Dec., ..	1005	7,279 16 6		
Ballycummisk—March, 1866	70	581 0 0		
June, ..	69	617 4 0	421	2,759 12 6
Sept., ..	142	1,024 4 0		
Dec., ..	120	573 0 0		
Cappagh—March, 1866	64	537 13 0	132	964 13 0
June, ..	68	388 0 0		
Sept., ..	100	356 1 0	194	549 11 6
Dec., ..	94	223 10 0		
Cronebane—Dec., 1866	62	503 13 0	62	503 13 0

Total quantity and value of Irish ores sold at Swansea.. 5750 .. £40,423 11 6

These figures scarcely represent, however, half the quantity of copper ore actually raised in Ireland during the last twelve months, inasmuch as two very important mines, besides some others, are not represented at the Swansea Ticketings—Knockmahon, county Wexford, the property of the Mining Company of Ireland; and Ballymurtagh, Vale of Ovoca, the property of the Wicklow Copper Mining Company. From the heads of the half-yearly account of the Mining Company of Ireland, published in the Journal of Jan. 12, it will be seen that during that half-year the Knockmahon Mine produced 2878 tons, valued at 7s. 1s. 6d. per ton, or at a total of 20,146s.; so that we may assume that some 5756 tons of copper, valued at about 40,292s., might have been added to the above summary from this source alone, if the company had sold their twelve months' produce through the Swansea Ticketings, instead of stocking it for better times and higher prices, or selling it through other channels.

The produce in copper of the Ballymurtagh, or Wicklow Copper, Mines, and of Ballycummisk—a still very productive mine on the same beds and lodes of ore as Ballymurtagh—it is not possible to ascertain exactly, nearly all being disposed of under the denomination of "copper pyrites," under special contracts with sulphur buyers, in order to utilise both the iron pyrites and the copper contained in the same. Cronebane, Tigrone, and Connorre Mines, also in the Vale of Ovoca, have all their copper pyrites, besides launders for the collection of precipitate of copper, and arrangements for the production of sulphate of copper, &c., none of which appear fully on the Ticketing Lists. It is, however, estimated that the total value of the copper thus produced in the county Wicklow, and sold outside of the Swansea Ticketings, cannot fall far short of 10,000s. per annum. From the summary above given are, of course, also excluded 631 tons, sampled on January 2, from Berehaven, and sold at Swansea on the 22d of that month, for 4612s. 12s., although the produce of last year.



It must also be borne in mind that Cappagh Mine, one of the once famous Audley Mines, county Cork, stopped making sales and working, in consequence of pecuniary difficulties of the owner, Mr. T. S. Cave, totally unconnected with this mine.

Mr. William Dargan expired at half-past 7 P.M. on Thursday, and Mr. Bianconi, the once-famous car proprietor, lies dangerously ill.

Our Irish Correspondent is rating us for having misimproved in this article of Jan. 26 the name of "Ovoea" into Avoca, but assures our blunders at the same time of his absolute on the score of having simply fallen into the very common error of ascribing its derivation to "Avon." As the Ovoca valley and hills form the most famous mining district of Ireland, and one of the most successful and interesting in Great Britain, he thinks it here the right place to explain that "Avon" merely signifies "river" in Irish, whence we have in the county Wicklow Avon more and Avon bog—as the great river and small river. Ovoca, on the other hand, means crooked or winding river, and is derived from "Oboea," by which name the combined stream has been honoured with mention by Ptolemy near 1800 years ago. The "Ovoca" is formed by the junction of the Avon more and Avon bog at a point near Castle Howard, and between the Cronebane and Knockanode Mines, and known as the far-famed "Meeting of the Waters," of which the national bard, Thomas Moore, wrote his exquisite melody on that— " . . . valley so sweet, . . . in whose bosom the bright waters meet," while he was on a visit at the hospitable and romantic cottage of the late Mr. Kempton, the fortunate proprietor of the then rich and still promising Concorre Mines.]

The CARNARVON AND BANGOR SLATE COMPANY has been incorporated, with a capital of 100,000L, in shares of 10L each, for the purpose of working the well-known Talsarn Slate Quarries, in the Nantlle Vale, Carnarvon. The property is bounded by the Cilgwyn, Dorothea, Coed Madog, and Pen-y-Bryn Quarries, and the produce is of the colour and quality known as Bangor slate, being on the same veins as those running through the Penrhyn and Asheton Smith's Quarries. The works are very extensive, and many thousands of pounds have been expended upon them, and it is now proposed to construct machinery for the manufacture of slabs on a large scale, for which some of the quarries on the property are highly suitable. There is a large number of buildings and cottages for workpeople on the property, with manager's residence, &c.; the rental for these alone is upwards of 200L per annum. The demand for slates has been steadily increasing for several years, and there has been a corresponding increase in the price. The property has been favourably reported upon by a number of practical quarry managers, who concur in the opinion that it is well worthy of energetic development.

The BRITISH AND AMERICAN TELEGRAPH COMPANY, with a capital of 600,000L, in shares of 20L each, has issued its prospectus. The object of the enterprise is to lay down one of Mr. T. Allan's patent cables from Falmouth to Halifax, Nova Scotia, relying upon a highly remunerative business by the conveyance of messages at a reasonable rate. It is explained that the improved cable from its peculiar principle of construction, smallness of bulk and light weight, which is about one-fourth that of the Atlantic, renders the carrying, submerging, and raising it for ocean depths and distances a simple mechanical operation, without risk of injury to its electrical integrity. The estimate of outlay and returns is based upon a tariff of 4L for 20 words, with the assumption of 400 words per hour, and 300 working days per year; yet it is shown that, after appropriating 20 per cent. to the formation of a reserved fund, the entire capital may be returned in less than 2½ years, after which the shareholders will still remain in possession of a property capable of yielding them a revenue of about 40 per cent. per annum. It is very justly remarked that the newspaper press alone would furnish a large and constant revenue if the prices were low, which can never be hoped for at the present exorbitant rates. The financial arrangements with Mr. Allan, the inventor and patentee, are most satisfactory—a charge of 5 per cent. on the capital of the company, with a deferred royalty on profits of 10 per cent. The board of directors includes the names of gentlemen deeply interested in the welfare of the districts in which the ends of the cable will be landed, so that it may reasonably be expected that the enterprise will receive their most earnest attention. With such names as those of Sir David Brewster, Sir P. Colquhoun, the Hon. Messrs. W. A. Henry, W. A. McDougall, P. Mitchell, and Freeman Morse, and Messrs. Layton, Page, Sutton, and Womersley upon the direction, no doubt need be entertained that all will be done to secure success that either science or practical experience in commercial affairs can suggest. The directors have given notice that the list of applications for shares will close on Wednesday next.

At Redruth Ticketing, on Thursday, 1715 tons of ore were sold, realising 7456L 18s. 0d. The particulars of the sale were:—Average standard, 114L 2s.; average produce, 6½; average price per ton, 4L 6s. 6d.; quantity of fine copper, 106 tons 14 cwt. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Jan. 10.	1513	1110	7 0	6½	£4 14 0	138,100
17.	360	112 0	13 0	6½	£4 14 0	138,100
24.	1073	104 17 0	6 12 0	6½	£4 14 0	138,100
31.	2961	112 8 0	6 12 0	6½	£4 14 0	138,100
Feb. 7.	1715	114 2 0	6 12 0	6½	£4 14 0	138,100

Compared with last week's sale, the advance has been in the standard 1L, and in the price per ton of ore about 1s. 3d. Compared with the corresponding sale of last month, the advance has been about the same.

The Standards of Tin Ore were advanced on Tuesday 2s. per cwt., and are now as follows:—Common, 82s.; superior common, 83s.; fine, 84s.; superior fine, 85s. No alteration in the price of metal.

At the Alderley Edge Mining Company meeting, on Jan. 31, a dividend of 5s. per share was declared.

At New Wheel Lovell meeting, on Jan. 31, the accounts showed a debit balance of 272L 7s. 2d. A call of 2s. per share was made. Mr. P. G. Hill having resigned the proprietorship, the following shareholders were appointed a committee of management:—F. Hill, T. P. Tyacke, W. Lanyon, B. Johns, John Pascoe, James Thomas, and Capt. Walter Johns; and R. H. Cross clerk of the mine, at 3L 3s. per month. Number of hands employed in the past quarter: 24 workmen, 25 surfacemen, 3 smiths, 1 engine, 3 landers and fillers, 2 stamps, 10 total, 65.

At the Dundalk Silver-Lead and Copper Mining Company third annual meeting, held in Glasgow, on Monday (Mr. Henry Kerr in the chair), the reports of Messrs. Kerr and Muir, the directors, Mr. T. C. Gregory, F.G.S., the engineer, and Capt. Bishop, of the Concorre Mines, Ovoca, Wicklow, were submitted, and, with the accounts, approved. The accounts showed costs charged up to Dec. 31, and 423L 16s. 9d. in hand. A call of 2s. 6d. per share was made, to carry on the works efficiently, consequent on the great improvement in the mine: 20 tons of lead have just been sold, and 20 tons more in course of dressing. It is expected that the returns will be regular and increasing. Full explanations were given by the Chairman, Mr. Gregory, and Capt. Samuel Bailey, the mine agent. A most satisfactory account of the state of the mine was also given by Mr. G. W. Clarke, one of the directors, who, with Mr. Dick, another director, had visited the mine.

At the South of Scotland Mining Company general meeting, held in Glasgow, on Monday (Mr. G. W. Clarke in the chair), the accounts and reports of the directors and Capt. Hawke, the mine agent, were submitted to the meeting, and approved. The accounts showed cash in hand 1641L 7s. 10d. After full explanations by the Chairman, Capt. Hawke, and Mr. Gregory, the company's consulting engineer, the meeting dispersed, after voting thanks to the Chairman for his conduct in the chair.

At the Glasgow Caradon Consolidated Copper Mining Company seventh annual meeting, held in Glasgow, on Monday (Mr. Alexander Harvey in the chair), the reports of the directors and Mr. T. Currie Gregory, F.G.S., the consulting engineer of the company, were submitted to the meeting. The accounts showed that the amount of ore bills, cash in bank, and in treasurer's hands amount to 410L 17s. 5d.; besides which there is available—call of 20s. per share, issued, 4313L 10s. 9d. and arrears of calls of 2s. 8d. and 3s. 4d., 466L 13s. 4d.—making 6544L 6s. 9d. After full explanations of the prospects of the mine by the Chairman, Mr. Gregory, and Capt. Wm. Taylor, the mine agent, the accounts were adopted, and a call of 5s. per share on the new shares made, to put the company in a better financial position. The costs are all charged up to Dec. 31, and the sum to be got from the call it is believed will amply suffice. Since the engineer's report was written, the lode in the 65 has much improved both in price and quantity of ore. An assay of the ore yielded 20½ per cent. It is expected that henceforth the returns will be greatly increased, and profits made. A very general feeling of satisfaction at the much improved prospects of the mine pervaded the meeting.

At East Rosewarne Mine meeting, on Monday (Mr. Ogilvie in the chair), the accounts showed a credit balance of 38L 5s. 10d.

At Pendean Consols Mine meeting, on Tuesday (Mr. Wm. Coombs in the chair), the accounts for the three months ending December showed a loss of 688L 8s. 11d. The general balance-sheet showed a credit balance of 266L 2s. 5d. Deducting the January cost (estimated), and crediting a parcel of copper ore on the mines (estimated), there was a balance in favour of the mine of 66L 2s. 5d. A call of 4s. per share was made. The report of the agents stated that, in concluding their report for the last meeting, they referred to four important points as being likely to be proved in the quarter. The present position of these were now fully explained, and from the appearance of the 82 north, on the great Pendean lode, the junction of this and the Pendean lode was, doubtless, very near at hand, and likewise the cutting of the Pendean lode in the cross-cut in the same level, 26 fathoms further south, in ground wholly untried. These points had been pushed on with all possible speed, and they had good hopes that some discovery would be made there. The 142 and the 164 fathom levels north are also

making satisfactory progress, and they considered it advisable to push on (as was now being done) with vigour, until those points were fully proved. The committee of management were re-elected, the name of Mr. J. B. Carr being added.

At the London Patent Coal Company meeting, on Monday (Mr. E. L. Cockerill in the chair), the balance-sheet showed that the company had assets, consisting of stock, plant, machinery, good debts, and cash at bankers, of the estimated value of 772L 6s. 3d., to represent the 7240L appearing as capital subscribed on the other side of the account.

The British and American Telegraph Company's shares were well supported on the market to-day, and closed firm, at 1¼ to 2¼ prem.

On the Stock Exchange there has been an increased amount of business in Mining Shares during the week. The following prices were officially recorded in British Mining Shares:—East Grenville, 1¼; Great Laxey, 17½, 16½, 17, 16½; Great Wheel Vor, 17, 17½, 17½; Chiverton, 8; Drake Walls, 1½; East Carn Brea, 3; East Lovell, 10½; North Roskear, 11; North Wheel Croft, 4 13-16ths, 5½; Prosper, 2½; Wheel Seton, 120.—In Colonial Mining Shares the prices were:—Scottish Australian, 1 15-16ths, 1 1-16ths; Cape, 8½, 8½; Yudanama-tana, 1¼.—In Foreign Mining Shares the prices were:—Chontales, 2½, 2½, 2½; St. John del Rey, 54½, 53½, 53½; United Mexican, 2½, 2½, 2½; Washoe, ½; Anglo-Brazilian, ½; Don Pedro, 5-16ths prem.; Fortuna, 2½, 2; Frontino and Bolivia, ¼; Pestarena, 1, ¼.

THE TIN TRADE.—Mr. L. Th. van Houten (Rotterdam, Jan. 31) writes:—Our tin market opened very strong in the beginning of the month, and a large business has been done at a gradual advance of 2½ fl. Towards the middle of the month, the navigation being closed by severe frost and snowstorms, less disposition was shown by buyers to operate, and the price gradually declined 1¼ fl. from the highest point. In the last few days, however, our market is again very strong, with large transactions at an advance of 1½ fl. from the lowest figure. Banca was in very active request, while holders offered their stocks very sparingly, and the price advanced from 50½ fl. to 52½ fl. After a decline to 51 fl., the market again improved, and closes very firm at 52½ fl. Billiton followed the course of Banca. About 1200 slabs were sold from 49½ fl. to 50½ fl. on the spot, and about 1800 slabs floated from 50 fl. to 50½ fl. The following statement shows the position of Banca tin in Holland on Jan. 31, from the official returns published by the Dutch Trading Company:—

1867.	1866.	1865.	1864.
Import in January	8,128	32,163	29,194
Deliveries in January	10,950	11,589	4,230
Stock second hand (on warrants)	120,569	84,909	62,677
Unsold stock	73,229	125,933	108,598
Total stock of Banca	193,798	210,842	171,275
Stock of Billiton	14,286	.....	.....
Quotation (Banca—New terms)	52½ fl.	54½ fl.	55½ fl.
Jan. 31 Billiton	51½	.....	.....
Of which 567 slabs were Billiton	.....	.....	.....

These returns, compared with those of 1866, exhibit a decrease of the import for January equal to 757 tons, a decrease of the deliveries for January equal to 32 tons, an increase of the stock second hand equal to 1123 tons, a decrease of the unsold stock equal to 1660 tons, a decrease of the total stock equal to 537 tons, and a decline of the quotation of Banca of 2L 18s. per ton. The government returns for the month of November are as follows:—

EXPORT OF TIN.		Eleven months.		1866.		1865.		1864.	
	Tons.								
Germany	183	137	116	2043	1589	1722	1722	1722	1722
Belgium	11	11	35	386	390	448	448	448	448
England	410	88	—	1096	544	1266	1266	1266	1266
France	121	160	54	1434	1028	938	938	938	938
Hamburg	31	20	18	312	187	188	188	188	188
United States	18	74	—	261	262	21	21	21	21
Other countries	3	3	1	501	350	379	379	379	379
Total	783	499	219	6033	4350	4962	4962	4962	4962

According to the official returns, the import of tin for consumption in France has been—

Eleven months.		1866.		1865.		1864.	
	Tons.						
England	122	142	260	1903	2142	1982	1982
Belgium	4	—	—	38	—	—	—
Holland	153	164	19	1750	1121	1298	1298
Other countries	42	3	50	260	504	554	554
Total	342	313	329	3972	3771	3844	3844

The following figures show the movement of tin in the United States:—

1866.		1865.		1864.		1863.		1862.		1861.	
	Slabs.	Tons.									
Imports	107,500	80,550	35,709	45,000	71,200	40,900	40,900	40,900	40,900	40,900	40,900
Delivery for consumption	84,600	72,340	49,160	57,450	55,100	47,800	47,800	47,800	47,800	47,800	47,800
Stocks, Dec. 31	30,600	19,700	11,490	24,350	37,400	21,300	21,300	21,300	21,300	21,300	21,300

Messrs. von Dadelzen and North write:—The business done in this article last month was very large, and forms a cheering exception to other metals. The reason is at once apparent, finding, as we do, our predictions of some time back now fully established facts. This article, after a long period of depression and disappointment, is at length found worthy of attention, from its improved position and its comparatively low price. The supply which for the past two years was evidently far in excess of the demand, is now barely equal to our requirements, and the heavy old stocks are beginning to decrease, as the following most important statistics clearly show. Besides the quantity coming forward for sale by the Dutch Trading Company in March, and that which will arrive here from the East during the next three months, will be found much below the prospective arrivals of last year at this time. The quantity of tin here and in Holland on Jan. 31, 1867, was as follows, compared with the three preceding years:—

1867.	1866.	1865.	1864.	
Stock in Holland	119,440	3440	84,909	2720
Arrived for next sale	72,662	2320	125,933	4030
Billiton in Holland	300	200	200	200
Stock here	3168	3530	3407	2482
Total tons	9628	10,300	8957	7252

The quantity of tin now afloat for England is 380 tons, against 1378 tons last year; to the Continent, 22 tons; and to America, 366 tons.

THE COPPER TRADE.—Messrs. Vivian and Younger (Feb. 8) write:—Either tough must rise or the importers will have to accept a lower price; and considering the general position of the article, as well as the fact that a capitalist will have to hold copper for a year for about 3L per ton, the probabilities are against the importers being induced to sacrifice their holdings, while the same cause should draw the attention of investors and shippers to the article. The market closes weak, with sellers in the majority.

FURNACE MANAGER.—WANTED, a first-class MANAGER, thoroughly conversant with the practice and theory of the CONSTRUCTION and WORKING OF BLAST-FURNACES, and the ASSAY OF ORES. State very full particulars of experience and remuneration required, none others will be regarded.—Apply, by letter, addressed to the Managing Director, Llynvi Ironworks, near Bridgend, Glamorganshire.

WANTED, A RE-ENGAGEMENT as COLLIERY MANAGER.—Many years' experience and first-class testimonials. No objection to go abroad.—Apply to "H.M.," MINING JOURNAL OFFICE, 26, Fleet-street, London.

WANTED, by a Young Man, who has had considerable experience in MINING, ORE DRESSING, &c., and has a thorough knowledge of ASSAYING LEAD, COPPER, SILVER, GOLD, &c., a SITUATION as MANAGER, SUB-MANAGER, or otherwise.—For references and further particulars, address, "D. D.," MINING JOURNAL OFFICE, 26, Fleet-street, London.

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WANTED, for the STIPERSTONES MINING COMPANY (LIMITED), from TWENTY to THIRTY 16 inch SECOND-HAND PUMP TREES.—Application to be made to the Secretary, St. John's Hill, Shrewsbury.

WANTED TO PURCHASE, A FEW SHARES in HERODSFOT and SOUTH HERODSFOT MINES.—State lowest price for cash to "Silver-Lead," Post-office, Liskeard.

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TO CAPITALISTS.—AN OPPORTUNITY IS NOW OPEN to one or more capitalists to EMBARK in an UNDERTAKING possessing all the elements of great success, for SUPPLYING the POTTERY TRADE with an ARTICLE which, from its intrinsic merits, commands EXTENSIVE SALE amongst manufacturers. Sum required, £5000, in four equal half-yearly instalments.—Full particulars may be obtained, personally or by letter, from Mr. DANIEL, solicitor, Cheshire, Staffordshire, or Cross Hill, Shrewsbury.

A GENTLEMAN having an extensive connection with merchants manufacturers, and others, would be GLAD to UNDERTAKE the SALE of PATENTED ARTICLES or INVENTIONS, upon commission.—Apply to Mr. W. T. RAWLE, patent and mining agent, 8, Small-street, Bristol.

SANDYS, VIVIAN, AND CO., COPPER HOUSE FOUNDRY, HAYLE, CORNWALL, ENGINEERS, IRON AND BRASS FOUNDERS, MANUFACTURERS OF PUMPING ENGINES FOR WATER-WORKS, MINING MACHINERY, MATERIALS, AND TOOLS of every description. Foreign mines supplied on the best terms, and at the shortest notice. Second-hand Mining Machinery and Pitwork in stock; also a new 4 and a 2-horse power high-pressure vertical engines, with boilers, and a second-hand 18-inch whim engine, condensing.

NICHOLLS, MATHEWS, AND CO., ENGINEERS, BEDFORD IRONWORKS, TAVISTOCK. MANUFACTURERS OF STEAM ENGINES OF EVERY DESCRIPTION, made on the BEST and NEWEST PRINCIPLES. We beg more especially to call the attention of the public to the MANUFACTURE of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK CASTINGS of EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON and HEAVY SHAFTS of ANY SIZE. CHAINS made of the best iron, and warranted. MINERS' TOOLS and RAILWAY WORK of EVERY DESCRIPTION. ALL ORDERS FOR ABROAD RECEIVE their BEST ATTENTION. NICHOLLS, MATHEWS, AND CO. have had 20 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required. Messrs. NICHOLLS, MATHEWS, AND CO. have always a LARGE STOCK of SECOND-HAND MINE MATERIALS in stock, and at moderate prices.

PATENT FLEXIBLE TUBING, AND BRACE CLOTH FOR MINES, MANUFACTURED BY ELLIS LEVER, PATENTEE, WEST GORTON WORKS, MANCHESTER.

RAILWAY CARRIAGE COMPANY (LIMITED) ESTABLISHED 1847. OLD BURY WORKS, NEAR BIRMINGHAM. MANUFACTURERS OF RAILWAY CARRIAGES AND WAGONS, and EVERY DESCRIPTION OF IRONWORK. Passenger carriages and wagons built, either for cash or for payment over a period of years. RAILWAY WAGONS FOR HIRE. CHIEF OFFICES, OLD BURY WORKS, NEAR BIRMINGHAM. LONDON OFFICES, 6, STOREY'S GATE, GREAT GEORGE STREET, WESTMINSTER.

THE BEVERLEY IRON AND WAGON COMPANY (LIMITED). MANUFACTURERS OF RAILWAY CARRIAGES AND WAGONS, WROUGHT AND CAST IRON CARRIAGE AND WAGON WHEELS, AXLES, HAMMERED IRON, AND HEAVY SMITHS' WORK FOR ENGINEERS, &c. BRASS AND IRON FOUNDERS. MAKERS OF PORTABLE FARM RAILWAYS, TURN-TABLES, CROSSINGS, SWITCHES, &c. AGRICULTURAL MACHINISTS, MANUFACTURERS OF FIELD, ROAD, and BARN IMPLEMENTS, PATENT LORRY, CART, and CARRIAGE WHEELS, with WOOD or IRON NAVES. REAPING MACHINES, CLOD CRUSHERS, CORN MILLS, &c. SAW MILL PROPRIETORS. GENERAL TIMBER CONVERTERS for home and foreign RAILWAYS, STATIONS, BARRACKS, EXHIBITIONS, &c. IRONWORKS BEVERLEY, YORKSHIRE. JAMES DEWHIRST, Sec.

THE BIRMINGHAM WAGON COMPANY (LIMITED) MANUFACTURE RAILWAY WAGONS of EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract. EDMUND FOWLER, Sec. WAGON WORKS.—SMETHWICK, BIRMINGHAM. \* \* \* Loans received on Debenture; particulars on application. London Agent—Mr. E. B. SAVILE, 67, Victoria-street, Westminster, S.W.

STAFFORDSHIRE WHEEL AND AXLE COMPANY (LIMITED). MANUFACTURERS OF RAILWAY CARRIAGE, WAGON, and CONTRACTORS' WHEELS and AXLES, and other IRONWORK, used in the CONSTRUCTION OF RAILWAY ROLLING STOCK. CHIEF OFFICES, 3 and 4, EXCHANGE BUILDINGS, BIRMINGHAM.

NICKEL AND COBALT REFINING, AND GERMAN SILVER WORKS, 16, OZZELL STREET NORTH, BIRMINGHAM. STEPHEN BAKER begs to inform the Trade that he has the following articles for sale:—REFINED METALLIC NICKEL, REFINED METALLIC BISMUTH, OXIDE OF COBALT, GERMAN SILVER—IN INGOTS, SHEET, WIRE, &c. NICKEL AND COBALT ORES PURCHASED.

GOLDENHILL, COBALT, NICKEL, COLOUR, BORAX, AND CHEMICAL WORKS, NEAR STOKE-UPON-TRENT, STAFFORDSHIRE. JOHN HENSHALL WILLIAMSON, MANUFACTURER AND REFINER, Purchaser of Borate of Lime and Tincl.

IMPROVED APPLICATION OF WATER POWER. THE TURBINE.

MACADAM BROTHERS AND CO., ENGINEERS, SOHO FOUNDRY, BELFAST, have been engaged for fifteen years, with complete success, in MANUFACTURING their IMPROVED TURBINES, and can recommend them with confidence. This machine is applicable to all practicable heights of fall and quantities of water, giving a much higher percentage of power than any other description of water-wheels. On low falls it has the additional advantage of not being affected by floods or backwater, and it is particularly well adapted for any falls where the quantity of water is variable. Further particulars on application, also references to turbines now at work on a great variety of falls.

LEAD ORES.		Tons.		Amount.		Purchasers.	
Date.	Mines.						
Jan. 26—Black Craig	20	£12 8 6	Walker, Parker, & Co.				
31—Trewetha	25	20 16 6	Treffry's Trustees.				
—ditto	6	10 4 0	Sheldon, Bush, & Co.				
Feb. 1—Minera	100	12 16 6	Walker, Parker, & Co.				
—ditto	90	12 16 6	ditto				
—ditto	64	12 16 6	ditto				
—ditto	56	12 18 6	ditto				

BLENDE.		Tons.		Price per ton.		Purchasers.	
Date.	Mines.						
Jan. 25—Great Laxey	300	£3 10 0	Vivian and Sons.				
Feb. 1—Minera	45	4 12 6	S. Kenrick and Son.				
—ditto	30	4 13 0	H. Southern				
—ditto	20	4 11 0	ditto				
—ditto	6	4 11 0	ditto				

COPPER ORES. Sampled Jan. 23, and sold at Tab's Mill, Redruth, Feb. 7.

Mines.		Tons.
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## WATSON AND CUELL'S MINING CIRCULAR

WATSON AND CUELL,  
MINING AGENTS, STOCK AND SHARE DEALERS, &c.  
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

**MESSESS. WATSON AND CUELL** having made arrangements for transferring their weekly Circular, which has had so large a circulation during the past ten years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and the state of the share market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when property conducted in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON and CUELL have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON and CUELL they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON and CUELL transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON and CUELL also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON and CUELL are also daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the most practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON and CUELL having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in rendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

**GREAT RETAILACK—"A Shareholder."**—A few weeks since we explained that the amount paid up had been £7. 19s. per share, and there are now about 4800 shares. West Chilverton present company was brought out in 3000 shares of 10s. each. We question if this mine ever looked so well at the depth as Retailack, and there is room in this mine for a very great coup. The engine will be at work in about a fortnight, and as the shaft is sunk 9 ft. a week, it may take (say) two or three months to see the lode at the next level.

"T. R."—Better refer it.  
"N. Y. Z."—We cannot advise here.  
"J. S."—The ore in East Russell is running towards New East Russell, and this latter will be the speculation some day.

"W. D."—A meeting has been called to divide the Drake Walls sett.

**PRINCE OF WALES—"A. J."**—Upwards of 30 fathoms of ore ground have been gone over in the 45 east, worth, on the average, about 30s. per fathom; and if the 45 east continues, and at present it is richer, this would give 9000s. worth of ore between the two levels. Above the 45 the lode is worth 20s. per fathom, which is not calculated in the estimate, nor is the 45 west. In the 45 east, soon after it was commenced driving, a small bar of peach came in and reduced the value of the lode, but when the bar was cut through, the lode became richer, and the same thing may, probably, happen in the 55.

"A." (Manchester).—About 25 fathoms of rich ore ground have been gone over in the 80, at Buller; and the 75 is now getting into the same run of tin. The 92 is also coming in.

**"INTENDING INVESTOR."**—We think well of all three as good speculations. At the general meeting of the latter, 12 months ago, it was stated the mine would last till the end of the year; and that a call would then be required. We hope it will be a long time before another is wanted. The returns ought to meet more than half the costs until another level is worked.

## IMPORTANT DISCOVERY IN CONNECTION WITH STEAM-ENGINES.

—A remarkable and very interesting pamphlet, containing a record of the conclusions arrived at from theoretical deductions, confirmed by carefully-made experimental tests, with reference to a most important point connected with the practical application of steam in the production of motive-power, has just been published by Mr. R. D. NAPIER, which is calculated to direct the attention of engineers to the question of the discharge of fluids from orifices of given size as to lead them materially to modify the views which they have hitherto adopted as orthodox. That the now received opinions have been so long upheld may probably be traced to the circumstance of its never having been philosophically attacked; for the careful personal and consideration of the deductions, and of the proofs of their accuracy, can scarcely fail to convince the impartial reader that Mr. Napier has much, very much, in favour of his arguments. Indeed, statements which he now puts forward as ascertained facts appear, after maturely weighing the evidence which could be adduced for and against them, so thoroughly to accord with what should reasonably have been expected that it is difficult to decide whether it is not more curious that the discovery has not been sooner made than that Mr. Napier has now made it. The nature of his philosophical and demonstrations shall be lucid and indisputable, and that he has succeeded in his object may be acknowledged. Whether the tests used are incapable of being improved upon may reasonably form a question for subsequent consideration, but that the results give at least great plausibility to the statements is beyond doubt. The pamphlet is one which everyone interested in the economic use of steam should peruse with care and attention.

"On the Velocity of Steam and other Gases, and the True Principles of the Discharge of Fluids." By Mr. R. D. NAPIER. London: E. and F. N. Spon, Bickersbury.

**"THE ELECTRIC TELEGRAPH."**—The history of telegraphy offers an enormous field for research, yet until now a comprehensive volume, embracing such an account of the progress of the science as to be alike interesting to the general reader and to the practical man, has been altogether wanting, at least amongst English works. In the book now published by Mr. R. SABINE, the author states that he has endeavoured to make it sufficiently elementary to come within the comprehension of every educated man, and at the same time sufficiently technical to be useful to electricians. The work contains a history of the electric telegraph, and descriptions of many of the past and existing methods and apparatus, and an abundance of scientific matter relating to cable work. Mr. Sabine traces the history of the science from 1772, when Stephen Grey, a pensioner of the Charterhouse, supported in the air a wire 700 feet long by silk threads, and conducted the electricity from an excited glass tube through it, to the present time, and fully notices every step in the way of progress which has from time to time been made. The history and progress of electric telegraphy having been carefully treated of, the second portion of the work is devoted to the science and practice, and displays an equally perfect acquaintance with the subject. The author claims that no new theories are started, nor has anything been introduced which experience has not confirmed as having merits to recommend it. The volume is one of the most complete and interesting which has yet been issued on the subject.

"The Electric Telegraph." By ROBERT SABINE. London: Virtue Brothers.

**"GEOLOGICAL MAGAZINE."**—The names of the contributors of the original papers to the February number of the "Geological Magazine" are alone sufficient to prove that the Editors spare no pains to render the work reliable upon the subjects treated of. The writers are—David Forbes, F.R.S., Professor Owen, Morris, and Huxley; Mr. Etheridge, paleontologist to the Geological Survey of Great Britain; and Mr. Carruthers, F.L.S. The articles being—"On the Alleged Hydrothermal Origin of Certain Granites and Metamorphic Rocks;" "On the Mandible and Mandibular Teeth of Coelodonts;" "On the Occurrence of Grey-Wethers at Greys, Essex;" "On Acanthopholis Horridus;" "On the Stratigraphical Position of the same Reptile;" and "On the Systematic Position of the Graptolites and of their supposed Ovarian Vesicles" respectively. The Notices of Memoirs, Reviews, Correspondence, &c., are of the usual instructive and interesting character.

**MANCHESTER GEOLOGICAL SOCIETY.**—The second and third numbers of the Transactions of the Manchester Geological Society are particularly interesting. The former contains an account of the excursion of the society to Bacup and Todmorden, with a technical report upon the geological formations examined; the latter containing a most interesting account of the Upper Coal Measures, with regard to the probable duration of our coal fields, by Mr. E. W. Binney, F.R.S., the President. An abstract of Mr. Binney's paper will be found in another column of this day's Journal.

**"DERBYSHIRE RED BOOK."**—The sixth annual edition of this admirable calendar has just been issued by Messrs. Bennet and Sons, of Derby. In addition to the usual almanac information, the Red Book contains a local postage, baronetage, &c.; a list of the magistrates, local courts, and local scientific and benevolent institutions; and lists of the educational establishments, and religious and other societies connected with the county. The book has likewise a good map of the county, comparative views of the Irongate, Derby, in 1566 and 1866, and a distinct railway map. The book is certainly one of the most useful and cheapest shilling's worth published in Derbyshire.

## THE BRITISH AND AMERICAN TELEGRAPH COMPANY (LIMITED).

FALMOUTH AND HALIFAX.

ALLAN'S SYSTEMS.

Capital £600,000 (with power to increase), in 30,000 shares of £20 each, of which 10,000 shares, fully paid-up, are to be taken in part payment of the contract for the manufacture of the cable.

£2 payable on allotment.

£3 on the 20th of March.

£5 on the 20th of May.

£5 on the 20th of July.

£5 on the 20th of September.

Arrangements will be made for facilitating the through traffic with Hamburg, Bremen, Antwerp, and other important continental seats of commerce.

DIRECTORS.

Sir DAVID BREWSTER, D.C.L. President R.S. Edinburgh.

Sir PATRICK COLQUHOUN, King's Bench-walk, Temple.

R. N. FOWLER, Esq. (Messrs. Dimsdale, Fowler, and Co.), Cornhill.

EDMOND W. GARDNER, Esq. (Attorney-General for Nova Scotia).

CHARLES MILLER LAYTON, Esq., 57, Wimpole-street, and Glasbury House, Hereford.

The Hon. WILLIAM McDONAGALL, Ottawa, Secretary of Canada.

The Hon. P. MITCHELL, President of the Executive Council, New Brunswick.

The Hon. FREEMAN H. MORSE, Consul for the United States, London.

THOMAS PAGE, Esq., C.E., F.R.S., 3, Adelphi-terrace, Strand.

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THOMAS WOMERSLEY, Esq., Ethelburga House, Bishopsgate-street.

ELECTRICAL ENGINEER—Thomas Allan, Esq., C.E.

CONSULTING ENGINEER—J. A. Longridge, Esq., Mem. Inst. C.E.

BROKER—Albert Ricardo, Esq., Angel-court.

BANKERS—Messrs. Dimsdale, Drewett, Fowler, and Barnard, 50, Cornhill;

London and County Bank, Lombard-street, and branches.

SOLICITORS—Messrs. Ashurst, Morris, and Co., 6, Old Jewry.

AUDITORS—Messrs. Johnstone, Cooper, Wintle, and Evans.

SECRETARY (pro tem.)—Mr. John Hogben.

OFFICES.—CROSBY HOUSE, 95, BISHOPSGATE STREET, E.C.

## PROSPECTUS.

The successful submergence and raising of the Atlantic cables open up to the public mind a wide field for commercial enterprise, the long-veiled question of the practicability of establishing electric telegraphic communication between far distant points being thus satisfactorily solved; while the high tariff rates incident to the costly cables already laid, the amount of capital sunk and route adopted, only point to the great public advantages to be obtained from a healthy competition.

The result of the working speed of transmission through the Atlantic cable prove that the estimate hereinafter stated may with confidence be relied upon; while the large amount of income received by the existing company, even at the high rate of £10 per message, shows what may reasonably be expected at the moderate charge which this company will adopt. The newspaper press alone would furnish a large and constant revenue, which could never be obtained at the high price of 10s. for a word of five letters.

This company has secured the exclusive right to use the well-known cable and system of deep-sea telegraphy, perfected and patented by Mr. Allan, which effect a saving of about one-third on cost of construction, with extra working powers, on the following terms—viz., a charge of 5 per cent. on the capital of the company, and a deferred royalty on profits of 10 per cent. one-half only to take effect when the net profits exceed 10 per cent., and the remainder not to take effect until profits exceed 20 per cent.

The cable, from its peculiar principle of construction, smallness of bulk and weight (only one-fourth that of the Atlantic), renders the carrying, submerging, and raising it for ocean depths and distances a simple mechanical operation, without risk of injury to its electrical integrity.

The physical elements of the route, the mode of selection of a route that enables the line of communication to be most cheaply constructed and productively worked, thereby permitting the adoption of a tariff so low, that it not only encourages traffic, but no other scheme of transatlantic communication at present known can in any way compete with, or impair, the commercial value of this company, the object of which is to establish a cheap telegraphic communication between London and New York by submarine lines from Falmouth to Halifax, Nova Scotia, thus organising direct communication between Great Britain, the Canadian and American continents, and entirely avoiding the land lines through Newfoundland, which have already been the cause of such frequent interruption to the telegraphic communication between the two continents.

The distance from Falmouth to Flores, one of the Azores, is about 1250 miles, thence to Halifax about 1350 miles, and that from Falmouth to Halifax direct 2400 miles. The expected increase of traffic, consequent on the reduced tariff adopted by this company will, in all probability, render it necessary to lay a second cable next season, with extensions to Bermuda and the West Indies.

A capital of £200,000 will be sufficient to complete the communication to Halifax, including an ample allowance for all contingencies, and the following is an estimate of what may be calculated upon as a return for that outlay:—

Estimating the charge for a message, not exceeding 20 words, from London to Halifax, at £4, and the power of transmission at the low rate of 400 words per hour, and assuming 300 working days of only 15 hours each, the aggregate receipts for the year would amount to £360,000.

Less working expenses, cost of management, and royalty ..... 60,000

Total ..... £300,000

Deduct 20 per cent. to form a reserve fund ..... 60,000

Upon this low estimate of traffic a net profit will be available for dividend of ..... £240,000

It must necessarily follow that this company, being able to adopt a much lower through tariff than the Atlantic Company, would always command preferential and full employment, with ample margin to reduce the tariff as the traffic increases.

A provisional contract has been entered into for the manufacture of the cable, delivered on board.

Prospectuses and forms of application for shares can be had at the offices of the company, or at the brokers, where the Articles of Association may be inspected.

**THE BRITISH AND AMERICAN TELEGRAPH COMPANY (LIMITED).**

NOTICE.—The SHARE LIST of the above company WILL BE CLOSED ON WEDNESDAY NEXT, the 13th inst. By order, JOHN HOGGEN, Sec. pro tem.

95, Bishopsgate-street, London, February 8, 1867.

## BLACK CRAIG CONSOLIDATED MINING COMPANY (LIMITED).

Incorporated under the Companies Act, 1862, limiting the liability of shareholders to the amount of their shares.

Capital £20,000, in 20,000 shares of £1 each, fully paid up, and £1 to be paid on application, £1 on allotment, £1 in four months, £1 in eight months, and £1 in twelve months after allotment, leaving shareholders without further liability. The holders of B shares to be paid 10 per cent. out of profits before the holders of A shares are to receive any dividend; the holders of B shares may be paid off by the holders of A shares at the rate of £10 for each £5 share, by giving the holders of B shares six months notice of their intention to do so.

DIRECTORS.—R. R. CUELL, Esq., Marazion, Cornwall.

JAMES WESTON, Esq., Sheffield.

THOMAS FIELD, Esq., Crown-chambers, Threadneedle-street.

Two other directors to be appointed at the first meeting of shareholders.

BANKERS—London and County Bank, Lombard-street.

SECRETARY—T. P. Scrivenor, Esq., 40, Norfolk-street, Strand.

AUDITOR—Daniel Betts, Esq., Cook's-court, Lincoln's Inn.

CONSULTING AGENT—Capt. Arthur Waters.

AGENT AT THE MINE—Capt. John Smitham.

OFFICES.—40, NORFOLK STREET, STRAND, LONDON, W.C.

## PROSPECTUS.

This company has been formed for the purpose of extending the workings under a large coal seam discovered in the 43 ft. level, and for developing the West Black Craig Mine, by the issue of 1000 B shares, and it is believed that the whole of the £5000 additional capital will not be required to be expended, before the mine will be making considerable profits. The sett is very extensive, and is held for a term of 31 years, from the 23d May, 1857, at 1-16th royalty, and is traversed by several lodes, three of which only have been worked on, and have produced enormous quantities of lead, copper, and blende ores. The mines are situated within a mile of the port and railway station of Painre, from whence supplies of coals and materials are obtained, and the ores forwarded to the smelting-works. From the size, nature, and character of the lodes, and their great productiveness at such a shallow depth, and the economy with which they can be worked (coals, for instance, being 8s. 6d. per ton delivered), it may fairly be said to offer advantages for the outlay of so comparatively small a capital that are seldom met with. The report of Captain Arthur Waters, Captain John Smitham, the late Capt. Stephen Eddy, Mr. George Henwood, and other practical mining agents, fully justify the belief that large quantities of ore will be produced by sinking deeper.

Prospectuses, plans of the mines, and forms of application for shares, may be had at the offices of the company.

TO COAL OWNERS, AND OTHERS.

**THE LONDON PATENT COAL COMPANY** are now GRANTING LICENSES for the USE of their PATENT for the UTILIZATION of COAL DUST. All communications to be addressed to the Managing Director, 26, Martin's-lane, Cannon-street, E.C.

**ANALYSES OF COAL, CANNEL, MINERAL OILS, and all OIL PRODUCING MINERALS are UNDERTAKEN by**

A. NORMAN TATE, F.A.S.I., &c., ANALYTICAL and CONSULTING CHEMIST, and CHEMICAL ENGINEER (Author of "Petroleum and its Products," &c.),

MOLD, NORTH WALES.

Plans and estimates for oil and chemical works prepared, and their erection superintended.

Assays of metals and their ores carefully conducted.

**EDUCATION IN COLLIERY ENGINEERING, MINERAL SURVEYING, &c.**—Mr. M. CHILDROY STEWART, M.E., SHERLAND HOUSE, WARMLEY, near BRISTOL, has at present VACANCIES for TWO or THREE PUPILS. Terms very moderate.

## Notices to Correspondents.

\* \* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt: it then forms an accumulating useful work of reference.

WEST MARIA and FORTESCUE CONSOLS.—Any shareholder, on application at the office, can have explanations of the no doubt unintentional mis-statements of an "Inquirer."

CRUSHING MACHINE—"J. F." (Heston).—A diagram of the improved pneumatic stamp, referred to last week, was published in the Journal of May 12 last, from which the details of the machine will be at once understood.

PEAT AS FUEL—"X." (Dublin).—We shall be glad to receive the particulars of the invention. There can be no doubt that where coal is scarce, or unobtainable, peat, compressed by a cheap and reliable process, could be advantageously employed. The cost of the machinery, as well as that attending its working, should always be considered.

Mr. Gunther's paper "On Mineral Deposits in North-Eastern Brazil," and Mr. Verran "On the Mineral and Industrial Resources of Newfoundland," shall appear in next week's Journal.

SHARE DEALING.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

\* \* The TITLE-PAGE and INDEX to the THIRTY-SIXTH VOLUME of the MINING JOURNAL was published, as a SUPPLEMENT SHEET, with the Journal of Jan. 26. The Supplement also contains the conclusion of the Paper on the Development of the Iron Trade, read by Mr. Jas. Robertson at the London Association of Foremen Engineers; the Proceedings of the Society of Engineers; and the inaugural meeting of the Incorporated Association of Mine Agents of South Staffordshire and East Worcestershire.

## THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, FEBRUARY 9, 1867.

## EXTENSION OF OFFICIAL COLLIERY INSPECTION.

As the whole question of GOVERNMENT INSPECTION OF COLLIERIES is now about to be re-opened, with a view to more efficient legislation upon the subject, it behoves all desirous of promoting, in the highest degree, the safety of the collier to have a care that all the bearings of the question are considered, and that no preconceived and erroneous notions are permitted to influence them. Upon the occurrence of such lamentable casualties as those at present fresh in the memory, there is too often a proneness to hastily adopt supposed remedial measures, which prove in practice to be attended with greater and more alarming evils than those sought to be removed. In the House of Lords, on Thursday, the Earl of BELMORE moved for copies of a circular letter from the Home Office to, and the reports from, the Inspectors of Mines on the recent accidents and explosions; and Lord WHARNCLEFFE, in moving for further papers, said that living, as he did, in the neighbourhood of the scene of one of the recent calamities, he had given much consideration to the subject, and thought that the law ought to be amended, so as to give Inspectors of Mines additional powers. In one instance which came within his own knowledge a mine was supposed to be in a dangerous state. The person who was interested in it warned those who worked in it of the danger, and at the same time a letter was written to the Government Inspector, who replied that nothing could be done in the matter. The number of Inspectors at present existing was quite inadequate to the work to be performed. Instead of their visiting mines only when they were reported to be unsafe, every mine ought to be regularly and periodically inspected. He hoped that the Government would devote their attention to the subject, and introduce the necessary amendments into the Act of Parliament.

That both of these noble lords are influenced by the best intentions cannot for a moment be doubted; but surely Lord WHARNCLEFFE cannot have expressed precisely what he intended to express in his statement as to the dangerous pit mentioned, and the Government Inspector's reply to the "person" interested. The entire case, as reported by Lord WHARNCLEFFE, is at once so improbable and inconsistent, that his own good sense and practical experience should have instantly convinced him that his information was inaccurate. Had his lordship been acquainted with the Act of Parliament, he would have known that had the dangerous state of the mine in question been shown, it would have been a shameful and deliberate falsehood on the part of the Government Inspector to state that nothing could be done in the matter. It would, probably, be a more accurate account if he stated that "the mine was erroneously supposed to be in a dangerous state," and that the Government Inspector replied "that nothing need (not that nothing could) be done in the matter." The 13th section of the Act of Parliament (20 and 21 Vic., c. 151) gives ample power to the SECRETARY of STATE to object to rules which "do not sufficiently provide for the safety of the persons employed in or about such mine or colliery;" and the rules being established, the Inspector has, by the 16th section, full power to see them enforced; whilst the 17th section gives him power over causes of danger not provided for by the rules.

To state that the number of Inspectors at present existing is inadequate to the work to be performed is, to say the least, an unproved assertion; whilst the careless manner in which their lordships have collected the data whereon their conclusions are based, is shown by the fact that Earl BELMORE, in confirmation of Lord WHARNCLEFFE's statement, asserted that Mr. WYNNE, the Inspector of the Staffordshire district, told him the other day that he had under his charge 300 collieries and 900 mines, thus confounding mines with shafts. Mr. WYNNE's inspection embracing, in fact, "300 collieries with 900 pits or shafts," which is not too large a number to be properly inspected. Hence Earl BELMORE's conclusion that "it is impossible that he should make an annual inspection of each of these" does not follow from his premises that Mr. WYNNE could never inspect more than three mines a day, and sometimes only one. It would probably be wise if Earl BELMORE would enquire of Mr. WYNNE whether his inspections during the whole time he has been in office, and making allowance for the time he was incapacitated by his railway accident, has averaged one per week, and, if more or less, what number of inspections he has made?

But the great question involved in the statement that the number of Inspectors is too small, is whether the Government can carry on industrial operations generally with greater safety to life than private individuals? No evidence whatever has been adduced to prove this, and it is unlikely that any attempt will be made to do so. With regard to periodical inspection, it is already provided by the coal-owners themselves, by their appointment of viewers, under-viewers, overmen, deputy-overmen, wastemen, and firemen; and these officers stand in the same relation to the hewers, putters, drivers, on-setters, and trappers, as the captain, mates, and petty officers of a ship stand to the ship's crew. So that until it be proved desirable to compel ships' officers to be Government servants there can be no justice in attempting to work mines by Government officials. If it be urged that the intention is to appoint Government officers, in addition to the existing staff, the danger would be infinitely greater, just as it would be most dangerous to send a passenger ship to sea with two captains with equal authority. The republican principle, "Liberty, Equality, Fraternity," may be all well in a thinly-populated territory, where each individual may do a vast amount of mischief without seriously injuring his neighbour, but in a closely-packed hive, like a colliery or a ship, it is desirable that more conservative views should prevail. Let it be made compulsory for all "special rules" to define distinctly the duties of every officer and workman in the pit; let no officer be employed unless he holds a certificate of competency for the duties he is appointed to perform, and in case of accident let each who fails to prove to the satisfaction of a suitable tribunal that he had no share in contributing to the accident have his certificate suspended for a longer or a shorter period, according to the gravity of his offence. If this were done we should have fewer colliery accidents, and an infinitely better class of colliery officials.



and colliers, than could be hoped for either under the present system, or under any extended Government inspection system that could be devised.

#### COLLIERY INSPECTION, AND CORONERS' INQUESTS.

"THE OAKS COLLIERY EXPLOSION.—The witnesses examined yesterday were mostly of a professional character. Mr. MAMMATT, the underclerk, was recalled, and said that he had never known Mr. MORTON, the Government Inspector, to go down the pit 'in his life,' nor had he known him send anyone down to see how things were going on." \* \* \* "Mr. BROWN, mining engineer, said that Mr. MORTON, the Government Inspector, went down the pit in 1856, but he did not think he had been down since that time. There was a strike on that occasion, the pit being then under Mr. MINTO's management, and Mr. MORTON, after his inspection, said he was well satisfied with the arrangements, and wished that all collieries in his district were as well managed. If they were, he would have much less trouble than he had then."—*Daily Telegraph*, Jan. 29 and 30.

It now appears that 361 human lives were destroyed by the explosion in the Oaks, and 93 by that in the Talke Colliery. Thus in a single week 454 men and boys have been killed in our mines. The unprecedented magnitude of this calamity, and its occurrence after so much has been done in attempting to prevent such "accidents," naturally excites a suspicion either that the means resorted to were inefficient, or that well-known preventive measures were either partially or altogether disregarded with impunity.

From the above extracts it is evident that one of the safeguards imposed by the Legislature for the prevention of explosions, and upon which great reliance was placed, has been grossly disregarded by the official representative of the Government. The fact is given on the authority of the sworn evidence adduced on the coroner's inquest by two witnesses thoroughly conversant with the subject. Rumours to the same effect have been long prevalent, and the subject has occasionally been noticed in the columns of the MINING JOURNAL.

With every desire to avoid personal allusions in the discussion of public questions, the magnitude of the interests at stake in this instance imperiously demands a fearless investigation, unrestricted by such considerations. As a public officer to whom the Government has entrusted the administration of the law, an Inspector of Mines is as responsible to the press and the public as any other functionary of the Crown.

Without going so far as to say that the explosions would and could not have happened had the mines been regularly and properly inspected, and all the provisions of the law strictly enforced, it may, perhaps, be fairly observed that it would have been some alleviation to the sorrow of the widows and orphans of the hapless victims, as well as to the thousands of humane hearts who sympathise with them, had they known that all had been done that could be done to prevent the occurrence of these dire calamities.

Unfortunately, however, there is a very general feeling that no such consolation is to be derived from the conduct of the official guardian of the lives of the poor colliers in the Oaks Mine. It appears that during the 14 years of his inspectorship he only went down the pit once, and that was 10 years since.

A terrible responsibility rests somewhere. This is not a question of competency or unfitness in the officer to efficiently discharge his duties, but whether there has been a persistent disregard of them altogether. Nay, more; it creates a fear that there is an alarming laxity of discipline, which is completely subversive of the object sought to be obtained by the creation of the office. From whatever cause this has arisen, whether it has been owing to the inexcusable negligence of the Inspector, or to the number of collieries under his care being too large to permit him properly to discharge the onerous duties imposed upon him, it cannot, it is thought, be attributed to the Act of Parliament, which gives ample powers to Her MAJESTY'S SECRETARY OF STATE properly to organise the working staff, and to appoint as many Inspectors as may be needed for the efficient administration of the law. Be this as it may, it is obvious that things cannot be allowed to go on as they have done. Some new effort must be made to stem the torrent of human blood that continues to be shed in coal mines. Parsimony, in such cases, is unjustifiable cruelty to a large class of most indispensable and industrious working men.

From the evidence that has been given at the coroner's inquests on the fatal accidents that have recently happened in the Oaks and Talke collieries, there is but one conclusion that can be deduced from it, and that is, that in neither case have the provisions of the Inspection Act been observed, nor has any attempt been made by the Inspector of either district to enforce that observance. In both cases the law has been inoperative for good, because it has been more or less ignored in practice. This is the result of the experience of sixteen years. It is evident, therefore, that some remedial measures are urgently required. It has been shown, in some instances at least, that a thorough and frequent inspection of the mines, upon which so much reliance was placed as a preventive of explosions and other fatal accidents, has been the exception rather than the rule. The Inspectors are very properly independent of each other, and are not subject to any superintending authority, save that of the SECRETARY OF STATE for the Home Department. Amid the vast multiplicity of other public duties, it is scarcely probable that the Home Office can devote that attention to the inspection of mines which its importance and the interests of humanity demand. On the occurrence of the recent explosions, the SECRETARY OF STATE availed himself of the able assistance of Mr. KENYON BLACKWELL as a special commissioner, to investigate the circumstances attendant on the explosions. This appointment gave general satisfaction, and more especially to those engaged or interested in collieries, among whom Mr. BLACKWELL'S great abilities and thorough knowledge of coal mining in all its ramifications and bearings is well known and highly appreciated. But if such an appointment was deemed necessary by the Government after the occurrence of such dreadful accidents, does it not evidence a want of confidence in the existing administrative department? and does it not suggest a fitting remedy for the evil? It is suggested, and by those who have devoted much time and consideration to the subject, that the present staff of Inspectors is deficient in number and defective in organisation. The number may be easily increased, and the organisation would be greatly improved by the appointment of an Inspector-in-Chief, who would be responsible to the Crown, and whose duties would be to exercise a supervision over the Inspectors, and to make a searching investigation into the causes of accidents where they occur.

Under the present system these important investigations are entrusted to coroners' inquests, and, as might have been anticipated, with very unsatisfactory results. Such inquests are, in fact, criminal courts, in which the technical rules of evidence exclude much information, which if received would add greatly to the elucidation of the subject. There is, besides, a natural reluctance on the part of the owners, their workmen, their friends, and neighbours, who usually constitute the majority of the most important witnesses, to say anything that may be construed as criminary, and their evidence, therefore, is as vague and indefinite as can be devised, and given with a hesitancy which rarely carries conviction with it. Nor is the constitution of this court suited to the purposes of such investigations. Neither the coroner nor the jury are fitted by education, and their usual avocations, to discharge the duties that are imposed upon them, however desirous they may be to do so. The following extract from a report of the inquest at the Oaks Colliery adds to the many other proofs previously given of the unwillingness of juries to listen to details, the importance of which they are unable to appreciate, and which they do not understand:—"On Thursday the evidence went to establish the topography of the mine, and details of the explosion, pointing to its scientific explanation. Several of the jury objected that they were incompetent, and unwilling to hear 'merely scientific evidence.' It was replied that the facts attainable now that all was fresh in memory could never be got before a Royal Commission." It was no wonder the jury were unwilling, hour after hour, to sit and hear evidence which they declared they were "incompetent" to understand, but upon which they were sworn to give a true verdict. You might as well insist upon a boy who was ignorant of the alphabet solving a problem in Euclid. The unfitness of coroners' inquests to perform such duties has frequently been discussed in the columns of the MINING JOURNAL, and it may be freely admitted that the subject is not unaccompanied with difficulties.

In inquests on persons killed by explosions in collieries, the stereotyped verdict has almost invariably been "Accidental Death." Would not the same end be obtained by limiting the evidence given at the inquest to the simple fact that the person was killed by an accidental

explosion in a mine, and leave to another and more competent tribunal the duty of investigating the recondite causes of the explosion? This would not only save us from the shame of delegating such momentous questions to the decision of confessedly incompetent judges, but the mass of reliable information that would thus be obtained would be of great service in suggesting means for the avoidance of similar accidents; for it is an old and sound maxim among civil engineers, that "one failure teaches more than twenty successes." The conducting of such supplemental enquiries might be safely entrusted to an Inspector-in-Chief and two Inspectors from distant districts, whose reports to the Secretary of State ought to be published, and sold at the lowest price, so as to be accessible to all concerned in the management of mines of whatever grade. It is rumoured that Government has appointed a Commission to investigate into the causes of the recent explosions. If this be needful in these cases, it is equally so in all others. The additional expense that would thus be incurred would be inconsiderable, whilst the good that would result would be great and unquestionable.

#### MINING AS AN INVESTMENT.

A paragraph appeared in the *Times* during last week, in which it was declared that the calls made by Cornwall and Devon mines during the last four eventful years amounted to 1,828,427*l.*; while the dividends during the same period were equal to only 751,713*l.*—that in 1864 the calls absorbed upwards of 400,000*l.*, yet the dividends were under 175,000*l.*—that in 1866 the former were 331,881*l.* in the aggregate, and the latter 90,596*l.* This was rather a startling announcement; but as no authority was given by our contemporary, we felt there was no necessity to transcribe the matter into our columns. A correspondent from Lincoln now, however, favours us with a letter, in which the paragraph in question is almost verbally embodied, with the addition that "I greatly fear unless the metal market greatly improves, the year 1867 will figure much higher in calls, but less in dividends." He begs us to give insertion to his communication, which he declares to be "a correct list of the amount of calls and dividends," and consequently leaves the impression that he furnished these statistics to our contemporary, which he now desires should be further promulgated through our columns. What object a gentleman in Lincoln can have in making such a communication is not for us to determine; but we are justified in looking with suspicion on any gratuitous statement of this nature from a channel, which necessarily cannot be so conversant with such facts, as those more specially and closely connected with the counties to which he refers. It is remarkable that the statement should be first sent to the *Times* and then to us. In our weekly list of mining shares there are 44 dividend-paying mines enumerated, 7 with dividends in abeyance, and 272 which have not divided profits, termed "progressive" mines. We take the list and prices as they stood in our last number. Of 39 of the first description we are enabled to determine exactly the amount of capital invested, and the dividends paid, but of five the figures are only given in part, thus the British Slate Company, in which 90,000*l.* have been expended, the dividend is declared to be 9 per cent., but the total of dividends is not furnished; the Mining Company of Ireland, which has absorbed 140,000*l.*, only the last dividend, 7*l.* 9*d.* per share, is mentioned; Merrybent is stated to pay 5 per cent., but capital not given; Pant-y-Glen 10 per cent., and Wheal Rose 10*s.* per share on 2000 shares. Of the remaining 39 the capital invested is 1,136,543*l.*, and the dividends paid thereon have absorbed 4,682,509*l.*, so that the money embarked has been returned four times over, and this, moreover, is on the average, after allowing for small returns in some instances, which naturally reduces those which have paid back 3, 5, 10, 15, and 20 times the original amount subscribed, to say nothing of Wheal Bassett, which comes to 159, South Caradon 278, and Devon Consols which is equal to 1000 times, and included in the average given. Mining, therefore, we think, is not without its great results, and although dividends may fall off, and fluctuate occasionally, there are always circumstances in explanation. We cannot, consequently, admit that the statement put forth is of any moment in considering the question of mining, and the amount called up cannot be put in contradistinction to the dividends of any special period, for the calls, necessarily, apply to the progressive mines, which must incur expenditure to enable them to get into the Dividend List, and the four years mentioned embraced a period of great speculation, when numberless companies were started with various amounts of capital. If the figures given be correct, it does not at all follow that the yield of the mines have deteriorated, or dividends fallen off, because the amount of the latter was 751,713*l.*, and the calls 1,828,427*l.*, in four years. However, assuming that 751,713*l.* only were paid in four years, it is equal to 187,928*l.* per annum, and as the capital, as already shown, embarked in the 39 dividend mines mentioned is 1,136,543*l.*, the figures of our correspondent are equivalent to upwards of 16½ per cent. per annum. What does he want more, and in what other branch of industry can he show better results?

Now let us look at the mines with dividends in abeyance. They are seven, but with respect to one—Wheal Exmouth—the capital is not stated, merely a cost-book company of 1024 shares, on which the last dividend was 2*s.* 6*d.*, so that we can only deal with the other six, whose collective capital is 154,648*l.*, and against which these *unlucky!* shareholders have only received 278,990*l.* in the shape of dividends, which is merely returning the invested money nearly twice over. The result, in fact, is that the 45 mines thus enumerated took 1,291,191*l.* from the coffers of the public, and returned 4,961,499*l.* in profits, leaving the properties intact, the shares at a high premium, and dividends continuing. Surely comment on such a state of things is unnecessary—such facts require no elaboration of explanation.

Let us consider the question still further, and bring to bear, in the balance, the "progressive mines," which, surely, is giving the broadest basis in favour of the depreciators of mining. We again refer to our list of last week, which will be found to contain 272 mines, with various amounts paid up, and representing a collective cash capital of about 4,250,000*l.* sterling. Adding to this the sum embarked originally in what are now termed dividend-paying mines—namely, about 1,250,000*l.*, as shown above—and the mines with dividends in abeyance, representing a little above 100,000*l.*, we have about 5,500,000*l.* as the mining capital of the country, and assuming always that the figures given as dividends by our correspondent are correct, they are equal to 4 per cent. per annum profit or dividend on the entire money embarked in 317 mining associations. In September, 1865, at a meeting of the shareholders of the Great Wheal Vor, Mr. G. Noakes, the Chairman, mentioned that "on a tabulated calculation it was proved that, taking all the outlay upon the whole of the mines of Cornwall and Devon, dividend, non-dividend, and progressive, upon the total amount there was a return at the rate of 5½ per cent. per annum."

In this we fully concur, and consider that he was then within the mark. Mr. Noakes is not a gentleman to make a statement haphazard, but only after mature consideration and research, and our own figures bear testimony of the accuracy of his estimate, for it must be borne in mind that we are not only taking the Lincoln figures as correct data, but are dealing with a period which has been most remarkable in bringing forth imprudent and speculative enterprises, with no other object, apparently, than profitless expenditure of cash, and so deteriorating from the balance as between capital and dividends. Again, if it be true that 1,828,427*l.* were paid in calls in four years, it must be remembered that 147 new mining companies alone were promulgated during the same period, which, consequently, is only 12,436*l.* for each, or 3109*l.* per annum, in calls, ignoring and setting aside altogether the numerous progressive mines which were previously in existence, and making demands on the shareholders from time to time. The *resumé* is that the present 39 dividend-paying mines represent an original capital of 1,136,543*l.*, and the proprietary have received 4,682,509*l.*; mines, with dividends in abeyance, represent a capital of 104,648*l.*, and have received back 278,990*l.*; and "progressive mines" have a paid-up capital of about 4,250,000*l.*, being, as already stated, a collective mining capital of about 5,500,000*l.* It must also be stated, in conclusion, that there are many mines in private hands, which are returning extraordinary profits, which if brought to bear in the calculation would materially change the aspect of the average; but, as we have already mentioned, we deal simply with our own weekly list, and representing this class interest, are not in any way ashamed of the result produced, even when including the 272 progressive, or non-profit, mines; while our figures,

apart from this list, are perfectly astonishing, and it will be difficult for our *disinterested* correspondent at Lincoln to produce a corresponding result in any other branch of British industry.

#### HOW TO MAKE ALL MINES PROFITABLE.

The position of English mines, as respects the production of ore and division of profits, is a matter which absorbs considerable attention at this moment, when supplies from our colonies and foreign countries are sent here in very considerable quantities. It is clear, however, that our yield of copper is, in reality, far beyond what is calculated, but the method of treatment has been quite inconsistent with the character of the ores, which, taken generally, are of a poor description; and as the accepted rule has hitherto been to throw aside all that does not come up to a given standard, immense quantities are to be met with at many places, which are now simply in the way of surface operations, and regarded as mere rubble and waste. An association is, we hear, in course of construction with a view of working these respective deposits, and keeping aloof altogether from mining, in the ordinary acceptance of the term. Besides rendering great benefit to the shareholders of the mines, where these poor ores and refuse deposits exist, much advantage must accrue to the proprietary of the new company, as their appliances will be inexpensive, and, necessarily, they will only treat ores which justify expectation of profit on assay or trial.

The quantity of precipitate offered at the Cornish Ticketings is continually on the increase, which proves that there is much less disposition to put aside ores as valueless, because they do not come up to the ordinary standard of production. There are only a few persons, however, who treat the low ores suitable for the precipitate process, and they have very meagre arrangements as yet to obtain profit, so that there is a good field for systematic treatment on a large scale. By establishing four distinct works in Cornwall, for instance, the advantage of an unfailing supply could be secured, and as each works could, probably, reduce for 25 mines, it is not unreasonable to suppose that 500 tons per diem could be treated; but in practice it would probably be found more economic to attach small works to the existing machinery of each mine, as the saving in carriage of ore, and facilities for obtaining power for nothing, which would otherwise be wasted, would more than compensate for any extra expense of management. The apparatus for treating 10 tons of ore per day would not occupy, it is stated, more than a space equal to that required for a 12-head stamps; and assuming only 8 units of copper, realising 13*s.* per unit, to be extracted, its value would be upwards of 5*l.*, which would leave a large margin for profit. We believe the calculation is that for every ton of English copper ore sent to the smelters there are 10 tons raised, and the estimate is that the 9 tons so thrown on to the ramp contain at least 1 per cent. of metal per ton of ore. If this be so, there is a fine field for operation; and as the chief expense on the part of the new company will be for fuel to calcine the ores, considerable advantage must accrue, even after allowing for a liberal royalty, or other payment, to the proprietors of the poor ores. The allowance of coal for calcination is usually 3 cwt. to 1 ton of ore, and 1½ ton of iron to precipitate 1 ton of copper; so that the outlay must be small, and the whole principle is simple in system and management. Richer ores will, of course, be dealt with where opportunities offer; but the basis of the project is essentially the treatment of poor ores.

#### "COAL AND STEAM SUPERSEDED."

Attention was called in an article in the *Mining Journal* of July 7, 1866, to an invention designed by Mr. J. SMITH, of Berkeley House, Liverpool, and Mr. S. A. CHEASE, of Egremont, Cheshire, for obtaining motive power, and it is now stated that their efforts have been crowned with success. Action and reaction is a law of Nature, evidenced by the ebbing and flowing of the tides and other natural phenomena. Can the natural forces of air and water combined be employed for mechanical purposes without chemical change? This problem these gentlemen claim to have solved by constructing an engine on the following principles:—They make a reservoir having two compartments, the internal compartment having a lift-pump for raising water or other fluids contained in the external compartment, thus giving and maintaining two levels of the fluid in the one reservoir. From the bottom and through the lid of the external reservoir they raise a tank, which may be made of any height. The whole of this portion of the engine must be made perfectly air-tight, so that any amount of air may be compressed into the reservoir. Within the tank, and fixed on its bottom and one side, are two cylinders, having two sets of valves, the one set opening to the fluid in the reservoir, and the other set opening to the fluid in the tank. Within each of the cylinders is inserted a hollow tube or float. The floats are attached by means of slings to a beam which rests on a fulcrum, giving to them the character of a pair of scales. Each float is surrounded by a cup-leather valve, which is fixed to the rim of the cylinder, to prevent any escape of the fluid contained in the tank through the aperture occupied by the float. On the head of one float is fixed a rod, which passes through a stuffing-box on the lid of the tank, and is linked to a beam on the outside. The other end of the beam is connected by a rod to the crank, and a second rod connects the crank with the lift-pump. An eccentric affixed to the shaft actuates the gear, which opens and closes the valves at the moment required. On the lid of the reservoir is fixed an air-pump with gear, which may be attached either to the beam or the eccentric, and which, at each rotation of the engine, throws a jet of compressed air into the reservoir. A safety-valve is also affixed to the lid of the external reservoir to let off the superincumbent pressure. A syphon feed-pipe descends from the head of the tank through the lid down to the base of the internal reservoir, having a sluice-valve to open or close the communication between the tank and the reservoir. This completes the mechanical arrangement of the present engine, but the principle is capable of modification and adaptation to marine, railway, or other purposes.

The next operation is to fill the tank, syphon feed-pipe, and internal reservoir with water or other fluid. The external reservoir is then partly filled, until the tank-valves that open into it are submerged, when the engine is ready for use. The floats being hollow, are lighter than a space of equal magnitude filled with water; and, consequently, it follows of necessity that when the valve on the first cylinder is open to the gravitic force of the fluid contained in the tank, that force acts on the bottom of the float, causing it to rise; while the valve on the second cylinder being open to the reservoir, causes the float to descend, there being no power to support it, thus producing a reciprocating motion, which, acting on the beam, gives rotation to the crank, and actuates the eccentric and the tank-valves, causing them to open and close at the proper time. This motion is continued until the valve of the syphon feed-pipe is closed, shutting off the pressure by which the water or other fluid is forced through the syphon feed-pipe. By the air-pump the power may be raised to any extent. The air being confined to the surface of the fluid, forces it through the syphon feed-pipe into the tank, and through the tank-valves into the reservoir, and thus produces a perfect circuit of motion.

#### ON THE PURCHASE OF RAILWAYS BY THE ITALIAN GOVERNMENT.

Letters from Florence make an important announcement, and one which may be safely, and wisely, followed by other countries. It is stated that Signor SCIALOJA, the Minister of Public Works, has presented a Bill to the Italian Chambers to convert into rentes the shares and obligations of railways and other companies which receive subvention from the Government. The Italians are, clearly, making great way in all national matters, and showing themselves wise in their day and generation, for nothing will give greater satisfaction to an influential portion of that community than the measure now proposed, besides being a source of income and benefit to the State, instead of continuing the burden of subventions. It appears that in Italy the extent of railways constructed, and in course of construction, is about 4800 miles, under guarantee from the Government of a minimum gross revenue of 1792*l.* per mile, which is equivalent to an annual gross traffic of the amount of no less than 8,601,600*l.* for the 4800 miles of railway; and as the estimated cost of making these lines is 12,800*l.* per mile, the total expenditure will



be 61,440,000 sterling, so that the traffic is equal to 14 per cent. on the outlay, and after deducting 50 per cent. for working expenses, the net revenue would be just 7 per cent. The working of the system, however, has proved the fallacy of these calculations, and Italy does not find itself an exception to other countries in this respect, but that the estimates of engineers and promoters are alike all over the world, and cannot in any way be relied upon. The actual gross revenue on the Italian lines already in operation is only 512½ per mile, after deducting 50 per cent. for working expenses, instead of 896½, so that the burden on the Government to keep faith with its engagements is 2,400,000 a-year, and the railway securities have become almost unmarketable. The Government, therefore, very wisely propose to purchase up the respective railways by the issue of rentes, which will produce a saving of about 1,000,000 per annum to the State on existing subventions, and give vitality to securities amounting to about 20,000,000, now of little or no commercial value, when required to be realised in the market; while, moreover, confidence will be restored in the minds of those who have already invested, and so enable other lines to be made to complete the arranged railway network of Italy, which, of course, depends more or less on its entirety. It is, therefore, considered that in about ten years the Government of Italy will be deriving a net revenue from the railways more than equivalent to the annual charges of the routes giving in purchase for the several lines. Belgium has succeeded well by adopting a similar system, and the example set by young Italy may be well followed by older States, such as Spain and Portugal, where existing traffic does not warrant the construction of railways by independent companies, but where the establishment of speedy communication will develop the latent resources of the country, and so in time produce for themselves the means of liquidating the expense of formation, while the Governments will have the means of concentrating their power in what part of the kingdom it may be necessary for military or other purposes.

#### REPORT FROM SCOTLAND.

FEB. 6.—January has not been a very auspicious month for the Pig-Iron Trade, as there has only been shipped—foreign, 18,187 tons; coastwise, 15,683 tons = 33,870 tons, against 41,756 tons in 1866, being a decrease of 7886 tons for the first month of the year. The low average price of the month is also worthy of note, being 54s. 4½d. as compared with 66s. 4d. same month previous year. The furnaces in blast have been diminished from 134 to 97; and the stock in store has been reduced 14,975 tons. Iron is undoubtedly working its way into position, and shy buyers now will probably be eager buyers before the spring is over, at increased rates. During the week the almost immovable sluggishness of the market has been apparent, prices oscillating between 53s. 9d. and 54s. 1½d. cash. The market was slightly firmer to-day, and a moderate business was done at the advance, 54s. 1½d. cash, 54s. 4d. a month, closing nominally at these prices. No. 1, g.m.b., 54s. 6d.; No. 3, 54s.; No. 1, Gartsherrie, 66s.; No. 1, Coltness, 66s.; No. 1, Glangarnock, f.o.b. at Ardrossan, 61s.

The enquiry which the reduction in prices caused in Malleable Iron is lessening, and were it not that several orders have been taken in the Clyde for new steamers, the market would be almost lifeless. This fact has caused a spurt, which it is hoped may be continued. The ironfounders are rather better off for orders, and the increase in shipbuilding will aid both the brassfounders and the copper-smiths. On Saturday the engineering firms in Greenock gave their men notice of their intention to reduce their wages after next pay-day.

Coals are getting rather easier in price, and the shipments are increasing. The tonnage, foreign and coastwise, this week was 19,750 tons, and in the corresponding week of last year it was 18,575 tons. The ironmasters have been selling their surplus output at a reduction, and the sale coalmasters will have to lower prices to meet them in the market. This will likely be done shortly, as a general reduction in miners' wages is expected to take place almost immediately. The colliers, notwithstanding the great depression of trade, are being agitated into adopting a uniform working day of eight hours over the whole of Scotland, and considerable funds have been contributed to pay the several deputations. The Union officials and deputies seek to control and regulate the working hours and wages of the men, and the masters must either submit or stop operations—it is the battle of labour against capital. It is to be regretted that something cannot be efficiently done to prevent emissaries from sowing discontent in happy and contented communities.

Amongst the Scottish exhibitors at the Paris Exhibition, to be opened in April next, will be Messrs. Geo. Shand and Co., Stirling, mineral oil; Messrs. J. Watson and Son, Bathgate, paraffin and paraffin oil; Messrs. Jos. Young, Bathgate, paraffin and paraffin oil; Messrs. Thomas Rowatt and Sons, Edinburgh, paraffin oil lamps; Messrs. R. W. Thomson, Edinburgh, rotary steam-engine, traction engine, steam gauge, &c. Young's Paraffin Oil Company, Bathgate, after deducting depreciation from works and plant, has a balance, out of which the directors recommend a dividend of 5 per cent., and a bonus of 4 per cent., to be added to stock.

During January two screw steamers and five iron vessels were launched on the Clyde, and on the Feb. 2, a handsome paddle steamer, for the fleet of Malcolmson Brothers, of Portlaur, of the following dimensions and tonnage:—240 by 27½, 32½ by 14½, and 1000 tons, British measurement.

#### REPORT FROM NORTHUMBERLAND AND DURHAM.

FEB. 7.—The state of the general trade of this district is considered more hopeful, but there certainly is great need of improvement yet in many branches. Iron shipbuilding on the Tyne has revived a little, and some good ships have been laid down at Jarrow; but in connection with this branch, one of those disturbances so fatal to the trade have just taken place—a strike having been commenced by the steam-tug builders of the Tyne. The masters allege that the agreement entered into some months ago for the men to work nine hours per day, instead of ten and a half, has seriously injured their trade, they have, therefore, given the men notice that the old rates will be returned to, and as the men refuse to accept the conditions offered, one of those hateful strikes is again the result. The Coal Trade continues good in all its branches, most of the works being well employed, and there certainly is a good prospect for the present year. The Iron Trade improves very slowly, and numbers of puddlers and millmen are inadequately employed; it is, however, hoped that as the year advances more employment will be met with in those and all other branches of the trade.

The meeting of the Northern Institute of Mining Engineers, on Saturday, was well attended, indeed it was crowded. Several new members were elected and others proposed, and this is one proof of the growing prosperity of the Institute that new members are elected at most meetings, and the total number of members increases rapidly.

Mr. J. Daglish's paper, "On the Conveyance of Coal Underground," was most elaborate, and will prove a valuable addition to this class of mining literature, as many details are given of the working of underground engines, and diagrams showing the power required at each stage of the journey. It will be recollected that this subject was prominently brought forward at the Manchester meeting and much discussion took place on the conveyance of coals underground by means of tail-ropes, endless chains, &c. A committee was also appointed to report on the whole subject, and the members of the committee are at present collecting information, and making experiments, so that much valuable information may be expected on those points when this report is given, and discussed, together with the various papers which have been read, bearing on the same important question.

A very lengthy and elaborate paper was also read by Mr. Cochrane, "On Ventilating Fans," more particularly on the machines of Guibal and Lemielle, but incidentally all the more important fans now in use on the Continent and in this country were passed in review. The main principles of mine ventilation were also touched upon, and the paper, when printed, cannot fail to be highly interesting and important. It is plain that ventilation by machines is destined to occupy more attention in this country in future than it has done hitherto, and it is believed by many that they will be successfully applied to the ventilation of mines generally. The large air-pump of Mr. Struve, of Swansea, attracted much attention at one time, but it does not appear to have made much progress of late; at any rate, the only machine ventilators which are attracting attention in the North of England are those of Guibal and Lemielle, and those are fully treated of in the paper of Mr. Cochrane. All who are interested in the subject, and have an opportunity, should read this paper.

Guibal's machines have been erected at the Elswick Colliery, near Newcastle, and at the Pelton Colliery, near Chester-le-Street; both these machines are doing good work, and producing a large amount of ventilation through the works; and Lemielle's machine is at present in course of erection at the Page Bank Colliery, near Durham,

so that on the completion of this latter machine a practical solution of the question as to the relative merits of the two machines may, perhaps, be arrived at. It must be considered that the subject is a most difficult one, as a great number of conditions are to be attended to, not only as to the state and dimensions of the particular machine employed, but also as to the extent and dimensions of the workings to be ventilated.

NEW BRANCEPETH COLLIERY WINNING.—The workmen employed in sinking the above colliery have discovered, at a depth of 67 fathoms, a fine seam of clean coal, 2 feet 11 inches in thickness. Mr. Teasdale is the engineer, and Mr. Cochrane the proprietor.

#### REPORT FROM MONMOUTH AND SOUTH WALES.

FEB. 7.—The slight improvement in the Iron Trade of South Wales, noticed in last week's report, is maintained, still business is, comparatively speaking, in a very depressed state, and it is with difficulty that many of the ironmasters can keep their works in operation. The new proprietors of the Aberaman Works, who came into possession on Monday last, have determined on stopping all the manufacturing departments and blast-furnaces, continuing only the mineral portion in operation. Within the last few days there has been an accession of orders, but, although they are not of much value, their being brought forward is looked upon as a hopeful indication of what may be expected to follow. There is no doubt that, as the year advances, the home requirements will be considerable; and, should the railway companies and the great contracting firms be able to provide the necessary capital to carry out their contemplated projects, a large amount of animation will be infused into the demands, and transactions will be more freely entered into. Signs of an improvement are manifested in the iron shipbuilding trade, and, should this favourable movement continue, the plate branch of iron manufacture will be much benefited. It is reported that Mr. W. Morris, M.P., is about becoming a partner with Mr. W. H. Nevill, of the Old Lodge Ironworks and iron shipbuilding yard, Llanelly, and that he will invest a considerable sum in the concern. With regard to the notice of a reduction in wages given at the Monmouthshire Ironworks, and noticed in last week's report, it may be stated that the hands at the leading establishments have expressed their willingness to accept the reduced scale, being convinced that the depressed state of the trade compelled the masters to adopt the course taken. They, however, expect that as soon as the demand will improve there will be a return to the old scale of wages. When this reduction is carried out wages will then be 20 per cent. lower than was the case 18 months ago. The committee of four shareholders recently appointed to examine into the affairs of the Ebbw Vale Company (Limited) have visited the establishments in Monmouthshire, but from what transpired during their inspection it is clear that their knowledge of iron making, and of the value of iron works, is a limited one. They may be good men to examine accounts, but as to any practical suggestions in reference to the working and developing of the company's vast property, their report cannot be of much value to the shareholders.

The export trade is chiefly confined to New York and New Orleans, for which ports a considerable quantity of railway iron has been shipped during the week at Newport. A few cargoes of bar-iron have also been cleared out from Cardiff for the continental markets. The aspect of affairs in the United States still creates a feeling of anxiety among several of the ironmasters in this district, and the appointment of Mr. Crawshaw Bailey, M.P., as one of the committee of investigation into the Atlantic and Great Western Railway Company's affairs, is a proof of the interest South Wales has in American matters. A few orders on foreign account have been placed, but the trade generally with the foreign markets is in about the same state as during the past four or five weeks. The pig-iron trade is very quiet, and prices are nominal. The tin-plate works are fairly employed, and for charcoal plates there is a fair demand. For steam coal the foreign demand is not so good as it was, and in the Aberdare portion of the district complaints are made that the colliers are not so fully employed as a month since. There is no doubt but that purchasers on continental account and the mail packet companies are well supplied, during the last two or three months, taken very considerable quantities; still there is a fair enquiry, and a moderate business is being also done with the East and West Indies. The long-continued adverse winds seriously affect shipping operations, as vessels are prevented sailing, and a large portion of those in the docks are loaded, waiting for a favourable wind to proceed to sea. The home trade is good, Birkenhead and the London and Midland markets taking considerable quantities. In the local consumption of house coal there is a slight falling off, but an average business is being done on coastwise account.

The Bristol and South Wales Wagon Company (Limited) directors have determined to recommend a dividend and bonus equal to 12 per cent. per annum, at the forthcoming general meeting, as well as carry large balances to the contingent and reserve funds. The company are not in any way affected by the suspension of Messrs. Shackleton and Ford, who were formerly their wagon builders.

At the Bridgend Petty Sessions, on Saturday last, a charge was preferred against Richard Thomas, for smoking underground in the Llynvi Vale Colliery. John Jones, the overseer of the gin-pit of the Llynvi Vale Colliery, said he saw defendant sitting down in the main heading smoking a pipe; he asked him what he was doing, when defendant replied that he was doing nothing, and hoped he (the overseer) would not report him. Upward of 200 men were in the pit at the time. Defendant did not appear, and a warrant was granted for his apprehension.

The freighters, traders, and other parties connected with the neighbourhood of Britonferry, are bestirring themselves in the matter of obtaining the narrow-gauge system extended to the harbour and docks. They contend that if the narrow-gauge were laid down to the harbour it would place them in direct and unbroken communication with Aberdare, Merthyr, the various coal fields in Glamorganshire, the Midland Counties, and the North of England, and also with the narrow-gauge railway system to the East, with which a large and increasing trade is carried on. At an influential meeting, presided over by Mr. E. H. Bond, Chairman and general manager of the South Wales Mineral Railway Company, it was resolved to forward a memorial to the Chairman and directors of the Great Western Company, urging upon them the desirability of extending their proposed narrow-gauge line to Britonferry. The Chairman stated, in the course of his observations, that Britonferry was the great outlet for all the South Wales mineral traffic, one freighter alone paying the enormous sum of 50,000l. per annum for transit dues, and that it was the intention of Mr. Talbot to lay down a third rail at his own expense, from Neath to Port Talbot.

The Monmouthshire Railway and Canal Company directors, in virtue of the powers vested in them, have elected Mr. John Lawrence, of the Glamorgan Ironworks, and Mr. William Evans, of Newport, to fill two vacancies at the board.

The arrivals at Swansea include—the Admiral Fitzroy, from Wallaroo, with 550 tons of copper ore, for Richardson and Co.; the Augusta Schneider, from Cuba, with 530 tons of copper ore, for Richardson and Co.; Copalpo, from Carrizal Bajo, with 11,085 quintals of copper regulus, for Richards and Power; the Undaunted, from Tilt Cove, with 196 tons of copper ore, for H. Bath and Son; and the Star of the West, from Chili, with 530 tons of copper ore, for H. Bath and Son.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

FEB. 7.—Trade, both in respect to Iron and Hardwares, is still very dull, but there are signs of recovery in the case of the latter, and even the demand for iron is, perhaps, a shade better. Beyond that there is nothing to say.

Before the terrible calamity at Talke passes out of notice, a few words may not be out of place respecting it. One point which must have struck everyone who has paid attention to the evidence given at the inquest is the want of sympathy of views and of feeling between the skilled managers and their subordinates who constantly directed the operations. To put aside for a moment the violation of rules by workmen in opening their lamps, smoking, striking matches, the firing shots without inspection, and lighting lamps in return airways—there was an evident absence of such an earnest impression on the minds of the subordinates of the danger of the mine, and the necessity of keeping every part of the arrangements for ventilation in good order, as those at the head of the work should at any rate have earnestly striven to produce. One fancies that it should have been found on enquiry that all the firemen had been gathered together by the manager, and the danger attending the workings pointed out; that they should have been urged specially to see that the door, on which depended the ventilation of a dangerous part of the mine, was never kept open, except for a short time, and that its importance should have been so felt that the upsetting of the train, which prevented its being promptly closed, should have at once led to steps being taken either to restore the ventilation by other temporary means of closing the opening, and by withdrawing the men. The success of a man who carries on large operations depends as much on being able to infuse his own spirit and to impress his views on the minds of those who carry them out as on having correct views himself. One can hardly avoid a reflection similar to that which Lord Macaulay made in his sketch of the life of Warren Hastings, who, he said, was urged by the East India Directors to send them money, and also told to behave to the natives and their chief with generosity and forbearance. Hastings, duly estimating the real wishes of those whom he served, obeyed the injunction, and disregarded the homilies. It is to be feared that a sort of feeling that the work must go on, that too much fuss must not be made about every trifle, pervades the minds of those who stand between the working miner and the general manager; and that a man who values his situation, and hopes for promotion, rather avoids than seeks occasion to report sources of danger, or to check the "get of coal," by guarding against possible calamities.

Another point is the evident indifference of workmen to danger, and their unwillingness to sacrifice even a personal indulgence, much less a reduction of the money they may earn, for a regard to safety,

Mr. McDonald has done well in bringing out with emphasis the total disregard of precautions by the men, and the complicity of the foremen, and also the dangerous state of the pit for some time before the accident. He may, however, do more. Is it not possible to create amongst colliers an intelligent appreciation of the sources of danger in mining, and a spirit of determination that necessary precautions shall not be violated? The man whose fears were aroused, and who saved his life by leaving the pit in consequence, never said a word to his comrades or superiors as to the apprehensions he entertained. It is to be feared that English courage prevails amongst miners in the form of hostility to "croakers" to such an extent, that a man who sees danger shrinks from expressing his anticipations. The men are not so severely dependent on masters or managers as to fear speaking their mind, if it be the collective mind of the whole body, but too many facts show that individual workmen stand in excessive awe of the majority, or, rather, of the prominent men who speak in the name of the rest.

An incident at the inquest is worthy of mention, and does not call for comment. A handbill had been printed and posted, evidently by working colliers, containing some remarks by the Editor of the *Mining Journal*, reflecting on the management of the mine, to which it was added at the foot this observation—"May the Lord save you from the jury that stamped with their feet and gave applause to that creature Coe, when he whitewashed the manager, Johnson, and who at once after admitted all was wrong. Miners of Staffordshire! Rise in your strength and call for vengeance on the wholesale murders that have taken place amongst you. The Miners' Association can save you from it." Commenting on this handbill, the Coroner said it was "libellous, untrue, and as false as hell." Surely such an accident as that at Talke should be the subject of a different enquiry than that conducted by such a Coroner and such a jury. We shall not, probably, have even Mr. Wynne's report for a year and a-half. Government should, at any rate, call for and print the report of its own officer on such a case without waiting for the issue of this year's Blue Book.

Again, the enquiry casts doubts on the assumption of the Inspectors before the Committee of the House of Commons last year that no additional inspection is required. They are right in maintaining that the mine owners and their managers must not be released from the responsibility of determining on the course of action to be pursued, but it is difficult to resist the impression that one or two sub-inspectors under them, acting as their eyes, and reporting to them, would often discover violations of rules and of the condition or good management which are now only revealed by their fatal results.

Two men were killed last week by a fall of coal at the Botteslow Colliery, near Hanley, in North Staffordshire, the proprietors of which are Messrs. Crewe and Pratt. There have been many lives lost at this colliery, and at a recent inquest, Mr. Wynne, the Government Inspector, remarked in very strong terms on the want of care in the management. It appeared that the opening was wide, and that on one side there was a fault, and in Mr. Wynne's opinion there should have been four times as many props as were used. Mr. Crewe, one of the proprietors, attended the inquest, and said the men were not stunted in anything, but were provided with everything they wanted. Expense was no consideration in the working of the pit. Mr. Crewe also said the owners of the pit were making arrangements for a more effective management of the pit, in which he had asked the assistance of the Government Inspector. Expense was not a question with them; they were only anxious to have the pit worked to the best advantage, and with safety. They were worn out by the repeated accidents which had taken place there, and he wished to say that they had been caused by no want of care or any singleness on the part of the proprietors. The jury, in returning a verdict of "Accidental Death," coupled with it the expression of opinion that there had been great carelessness—only falling short of criminal culpability—on the part of the person whose duty it was to look after the timbering.

An explosion occurred on Friday at the ironstone pits of Messrs. Sparrow, at Longton. Seven persons were injured, three of whom were conveyed to the infirmary, and hopes are entertained of their ultimate recovery. Of the other four, who were taken home, all but one are going on well, but he is very badly burnt, and his recovery is as yet doubtful. It is understood that the men were working with naked candles at the far end of the drift, and the explosion took place directly after the firing of a shot. Stephen Cooper, one of the batties at the pit, is amongst those slightly injured.

At the Oldbury Carrage Company meeting, at Worcester (Mr. R. W. Johnson, chairman), a dividend at the rate of 15 per cent. per annum, free of income tax, was declared. The Midland Wagon Company declared an interim dividend at the rate of 15 per cent. per annum. The Birmingham Wagon Company dividend will be at the rate of 10 per cent. per annum; and the Patent Nail and Bolt Company will pay a dividend of 10 per cent.

#### REPORT FROM DERBYSHIRE AND YORKSHIRE.

FEB. 7.—There is no alteration in the Iron Trade of Derbyshire requiring notice, the demand at the largest establishments for gas and water-pipes being fully equal to what it has been for some months past. Matters at the collieries in the same district are much healthier than they have been, and the dispute at Staveley and Clay Cross is fast approaching a termination. At the former place most of the workmen whose notices have expired have again offered themselves to be taken on, whilst the secessions from the Miners' Association are so numerous that the company now find no difficulty in keeping all their collieries fully going. At Clay Cross, also, a free labour society has been established, to which the men have flocked in great numbers. So far there is very little doubt that the attempt to form an association antagonistic to the colliery proprietors has signally failed. The returns for January show that a much larger quantity of coal than usual has been sent from Derbyshire to the metropolis, the Clay Cross Company alone having forwarded 25,415 tons, of which the London and North-Western Company carried no less than 12,714 tons, whilst Staveley, in addition to its own large consumption, and the many markets it has to supply in other localities, sent to the same place 3912 tons. Business is by no means so active in the Sheffield district as is usual at this time of the year, although some of the steel houses are kept fully going, but in several of the other branches matters are very quiet. Notices have been given to some of the puddlers on one of the largest establishments that they must submit to a further reduction, in consequence of the present state of the iron trade, otherwise they will have to go out; and it is expected that the men will prefer turning out to remaining at work.

In the iron and colliery districts of South Yorkshire matters are in a much healthier state than they have been for some time. At Ebscar one of the blast-furnaces is at work, and two new ones are expected to be shortly blown in. It is said that there is a good prospect of the trade in rails being resumed, as an order for 7000 tons has just come to hand. At Milton, where the men have been out, the blast-furnaces were blown in on Sunday night, an agreement having been come to, concessions on both sides having been made. The coal trade continues active, and the orders on hand for Silstone house coal are sufficient to keep the collieries going. At some of the Barnsley collieries, however, during the last few days there has been a falling off, so that stacking has been resorted to. The London trade, however, continues active, and the very high prices charged to the metropolitan consumers have been reduced during the past week. During January the quantity of Silstone sent to London was very large indeed, and included 5508 tons from Wharfedale Silstone, 2629 tons from Newton and Co., 3554 tons from Cooper and Co., and 2082 tons from Mr. Clerkes. To Leeds, Sheffield, and the Lancashire cotton districts a good business has been done, and the trade in all its branches may be quoted as good. For the first time for some weeks past it is gratifying to state that the district is now free of disputes. The Holmes colliers on Tuesday accepted the masters' offer to pay the same amount for 29 cwt. as they had been paying for 21 cwt., and today the men at Wombwell Main resumed work on the same terms, after having been out for several weeks.

There is no alteration in the state of affairs at the Oaks Colliery, the gas coming up the 9-in. pipe in the No. 2 shaft, which is sealed up, at the rate of 300 cubic feet per minute. It is almost needless to state that some months must elapse before any attempt will be made to unseal the shafts or to recover the bodies.

The strike of ironworkers in Blackburn, who refuse to agree to a reduction of their wages, has thrown about 3000 men out of employment. At a meeting on Monday the men again passed a resolution not to accept the reduction. A few of the works are still in operation on the old terms.

A meeting of colliers connected with the Colliers' Union of Ashton-under-Lyne, Dukinfield, Newton, Bardsley, Waterloo, Broadbaks, and Coppas House, was held on Monday, under the presidency of Mr. Joseph Tomlinson, of Dukinfield Hall. There were about 1500 present, and each lodge was represented by a delegate. Resolutions were passed in favour of the hours of labour in coal mines being limited by law to eight hours per day; against contracts of service, as being entirely for the benefit of the master, so long as the labourer is not paid by the day, but by piece, who is thus at the mercy of the master, who is not compelled to find him sufficient work to occupy his time, and condemning indignantly the determination of the masters to employ new hands without relieving with them a certificate of character from their last place of employment. After a long address from Mr. Brown, followed by some discussion, it was unanimously resolved that no one over 14 years of age should be allowed to join the Union who was not a miner. The question as to engaging an agent was referred back to the lodges for discussion. On the lodges being called over, it appeared that some had received an advance of full twopenny in the shilling; others had only partly received the advance, and some had not received the advance at all; and it was determined to refer this question back to the lodges and the district committees, and to communicate with Oldham, Poynton, and other places. A long discussion took place as to the commencement of the eight-hours system, and the conclusion was to refer it back to the lodges and the district committees, and to confer with the Oldham, Poynton, and Whalley Associations.

A meeting of miners, convened by the Association of Organised Trades, was held at Nottingham, yesterday evening, when Mr. Ward, of South



Yorkshire (delegates from the Miners' National Association), urged the necessity for better ventilation in coal mines, and called upon the meeting to petition Parliament for that object, and also for a better inspection of the pits. He advocated the eight-hours movement. Mr. Clarke, of South Wingfield, concurred. He said the colliers wanted to get paid for 20 cwt. to the ton; in many places 30 cwt. had to be worked to the ton, and this, he thought, was a great grievance.

Alluding to a proposition of the Government to bring forward a measure for improving the relations between masters and men, Mr. West, secretary of the Nottingham Lace Trade Union, said that the men were willing to meet the masters amicably, but he thought the Government should be very careful how they dealt with Trades' Unions as they were organised at present.

At the Wakefield Court-house, Moses Day, employed at the West

Ardley Coal Company, was charged with violating the colliery rules. On Jan. 19

he smoked in the workings, lighting his pipe by drawing the flame of his safety-

lamp through the gauze. He was sentenced to 14 days hard labour, and was

also fined 2s., or in default 14 days additional imprisonment for leaving his work

without notice.

At a meeting of miners in Manchester, Mr. McDonald, President of the

Miners' National Association, said he would tell them what he thought should

be done to improve the condition of the collier. There should be a Minister of

Mines, more inspection, and more education for the miners' children. They

should never be satisfied till the sacrifice of life to the extent of 1000 a year was

ended. He would not recommend revolution; but he had some influence with

the mining population of this country, and if need be he should not hesitate to

ask the colliers to lay down their tools for a week, so that the public might be

made to feel the want of the comforts which the miner supplied, and compelled

to assist the miner in securing the reforms he so greatly needed. One great help

in that movement would be to compel colliery proprietors to keep the widows and

orphans whose husbands and fathers had lost their lives in the pits. If the

Legislature compelled colliery owners to adopt that course, and refused to allow

them to appeal to the public, or to allow the sufferers to go on the poor rates, the

colliery owners themselves would adopt better means to preserve life. He con-

sidered the recent inquests at Barnsley and Talk-of-the-Hill as mere mockeries,

and he hoped that the miners would ask a Royal Commission on the Oaks and

Talk-of-the-Hill accidents. Mr. Telford said the miners' difficulty was a question of pounds,

shillings, and pence; and that for their moral improvement it was necessary there

should be great improvement in education. He moved that Government should

be asked for a Royal Commission into the recent accidents at the Oaks and Talk-

of-the-Hill. Mr. Philip Casey, of Barnsley, seconded the motion. He said the

Act of Parliament stated that the gas within mines should be sufficiently diluted

and rendered harmless, and, as a practical miner, he believed that could be done,

and that every pit in England could be as safe as that room he occupied, and

there was no working place in inspection at present in use was a mockery, and he

considered the system of inspection at present in use was a mockery, and he

was confirmed in that opinion by the number of accidents that were occurring

weekly. He believed there were mines in Yorkshire, within ten miles of the Oaks

Colliery, in as dangerous a condition as that mine, and might explode at any

moment. The safety of collieries was purely a question of money, the sinking

of shafts, and the improvement of ventilation. Knowing these things, he and

other miners were not satisfied with the result of the recent inquests at Barnsley

and Talk-of-the-Hill, and desired a Royal Commission on the subject. Mr.

W. McKean, of Wigan, said whatever might be the real cause of colliery accidents,

the coroners' inquests never resulted in anything more than a verdict of accident.

At Park Lane, about a year ago, only 4000 feet of air per minute were

passing into a pit that ought to have been supplied with 20,000 feet. The more

recent accident at Dukinfield was not improperly attributed to negligence. He

knew of pits where there was so much carbonic acid that lads had to be engaged

doing nothing else, but to consume the atmospheric air that was necessary

to keep the flame alive. In the course of his remarks the speaker called for a

show of hands from those who had not seen an Inspector in their pits. About

400 hands were held up; and one of the audience said he had been a collier for

37 years, and he had never seen a Government Inspector in his life.

**PUDDLING BY MACHINERY.**—The proprietors of the Northfield

Ironworks, near Rotherham, have had in operation for the past three

weeks a machine for puddling iron, which has proved most satisfac-

tory. The machine is the invention of Mr. John Griffiths, of

Derby, and is the result of a number of experiments made during a long

practical experience in the management of puddling forges. The apparatus is not

complicated nor costly; can be placed on any ordinary furnace; and will not

only work double the quantity of iron usually operated upon, and finish it

better, but it will do it at a less percentage of waste. It is not expected to

supersede entirely human skill and exertion. The judgment, attention, and

practical experience of the puddler, where the machine is used, will always

be required, as long as the supported system of making iron shall last; but this

apparatus will lessen very much the mere physical toll now required in the

process. The workmen at Northfield have taken to it wonderfully, finding that it

does better both for them and their masters than they could themselves. The

furnace is charged in the ordinary way, "but so soon as the melting moment

comes, and the hand-work of keeping the iron curds and whey continually

stirred arrives, when the puddler should begin to strain back, muscle, and

nerve, and perspire from every pore of his naked skin, the long pole, which

rake or poker into the hands of a long iron bar, with a rest that does duty for

hands, and which hangs suspended in front of the furnace, turns on the steam,

and immediately the iron bar begins puddling with a measured turn, twist, and

poke, which works the iron quite clean from the bottom, and out of the jaws of

the furnace, and puddles it into the ball condition, that renders it agreeable

to the shinglers. From the time the heat was charged yesterday to get-

ting out the first ball was one hour and fifteen minutes, and the puddler

was considerably tired. The iron balls in the heat, all of which shingled first

class. At the ordinary furnaces the men were stripped to the skin, and

appeared jaded and worn out, while those engaged at the machine wore their

waistcoats and braces, and were not in the slightest degree distressed. The

machinery is thus described by persons professing to have a thorough knowledge

of the details:—On the top of the furnace-plates two cross bars are fixed, and

these support a circular bed-plate, the highest point of the arch of the fur-

nace. A vertical shaft is supported by the bed-plate; and at the lower end of

shaft passes through the bed-plate, and carries at bottom a pulley, by which

rotary motion is given to the shaft. On the shaft, a short distance above the

bed-plate, is another plate of the same size as, and parallel to, the bed-plate, and

the other plate is loose upon the shaft. The same plate is supported on the

bed-plate by means of spheres or balls rolling in a groove in the bed-plate. The

plate loose on the shaft, or the movable plate as it may be called, receives a

reciprocating motion from the crank of the shaft. To the movable plate a jib is

joined, which jib is set about midway between a vertical and horizontal po-

sition, and projects about 18 inches beyond the furnace door. To the projected

end of the jib a bar or hanger is suspended, the lower end of the hanger being

joined to the puddling tool or rabble. At the top of the vertical shaft is a

crank, and a horizontal connecting-rod from the crank is joined to the hanger

about 2 ft. from the point where it is suspended from the jib. A bevil-toothed

wheel is fixed on the vertical shaft, and a short distance below the crank; and this

wheel gears another bevil-toothed wheel of larger diameter. The latter is fixed

on one end of a horizontal shaft, working in bearings on a movable plate. On

the other end of the horizontal shaft is a pinion, which works into a hollow

curved rack, fixed to the cross-bars which carry the machine. This rack is of

the form of a quadrant, and is situated in the horizontal plane. An opening

is formed in the quadrant through nearly its whole length, and both the upper

and lower edges of the opening are provided with teeth. The pinion in travers-

ing the rack passes along its teeth, and so on, the pinion being

guided by a plate situated between the upper and lower rows of teeth. In this

way the rotary motion of the shaft is made to communicate a reciprocating

motion to the movable plate. The action of the machine is as follows:—Motion

being given to the vertical shaft, the puddling tool is worked backwards and

forwards across the furnace by means of the crank and connecting-rod. The

pinion working in the double quadrant rack communicates a reciprocating

motion to the movable plate, and the jib pointed to it, and by the combined motion

the puddling tool is made to travel up and down and across the furnace, and

the iron is stirred very nearly in the same manner as by the manual operations

of the puddler.

**NORWOOD COLLIERY, KILLMARSH, CHESTERFIELD.**—On Satur-

day a substantial supper was provided for the workmen at this colliery, by the

Sheepbridge Coal and Iron Company (Limited). In commemoration of having

reached coal there, at a depth of about 170 yards. Upwards of 80 sat down, and

a very pleasant and agreeable evening was spent by all present. Amongst the

company were the Rev. E. E. Smith, Incumbent of Killmarsh, and several

Killmarsh gentlemen. Mr. Longbottom, manager at the colliery, was called

to the chair, and, after the cloth was drawn, briefly opened the proceedings, by

referring to the remarkable and almost unexampled success that has attended

the sinking of these shafts, the coal having been reached without a single

accident of any kind; he considered this a matter for congratulation and thank-

fulness, as they had difficulties to contend with in the earlier part of the sinking

which required both great skill and judgment from the management, and also

great endurance and exertion on the part of the men, to overcome. He paid a

high tribute to the master-sinker, Mr. Wain, for the tact and energy he had

shown in the undertaking, and congratulated all on the amicable way they had

worked together, and on the good feeling that had prevailed throughout. The

Chairman then proposed "Continued Success to the Norwood Colliery, and Pros-

perity to the Sheepbridge Coal and Iron Company," which was drunk with great

enthusiasm. Mr. Smith next proposed the health of Mr. W. Fowler, Whittington

Hall, the esteemed managing Chairman of the Sheepbridge Coal and Iron Com-

pany, which was rapidly drunk with musical honours, and with three cheers

three cheers and one over, and same honours for Mrs. Fowler and family. Mr.

Birkbeck and Sheepbridge staff received a similar ovation; also Mr. Longbottom,

manager at Norwood. Other toasts were drunk, and the remainder of the

evening was spent in songs, &c., most of them given in really excellent style.

Mr. Simmonite, Angel Inn, Killmarsh, was the caterer, and great credit is due

to him for the way in which the supper was served. The Norwood Colliery is

sunk for the purpose of obtaining the Hare Coal. The seam is nearly 2 ft. in

thickness, of excellent quality, and will no doubt prove a very valuable

property to the Sheepbridge Coal and Iron Company. Very powerful machinery

already erected, and when the colliery becomes developed it is expected that

the daily output will be from 600 to 700 tons. The Midland Company are now

constructing a railway to the colliery, the Act for which was obtained last session.

**THE WREXHAM ADVERTISER, DENBIGHSHIRE, FLINT-**

**SHIRE, SHROPSHIRE, CHESHIRE, AND NORTH WALES REGISTER**

(Established 1848).—The town of Wrexham forms the centre of a large and im-

portant agricultural and mining district, which, from the increasing attention

of capitalists, aided by the advantages afforded by new railways, is rapidly in-

creasing in population, and bids fair to rival Wolverhampton in commercial

importance. The Advertiser, partaking of the general prosperity, has largely

increased its weekly circulation, 1000 more copies being now issued of each im-

pression than at the close of 1864, and it now has a circulation more than dou-

ble that of any other paper published in Denbighshire and Flintshire, and is the

only medium by which advertisers can fully and effectually communicate with

the public generally in those counties. Price 2d., stamped 3d. Published by

Bayley and Bradley, Advertiser office, Wrexham.

**CAPT. S. MICHELL, of NEW TRELEIGH MINE, REDRUTH,**

has PROCURED SEVERAL MINING BETTS, TWO of which are situated

in the neighbourhood of the CHIVERTON MINES, and are traversed by

several large SILVER-LEAD LOSES peculiar to that district; and one in ILLO-

GAN, containing five loaves, all of which are productive in COPPER, BLENDE,

MUNDIC, and LEAD. Also, a MUNDIC BETT, that he can safely recommend.

Capt. S. MICHELL will not object to negotiate with any respectable party with

a view to DISPOSING OF or WORKING these VALUABLE PROPERTIES.

**THE HENDOLL SLATE AND SLAB COMPANY**

(LIMITED), BIRMINGHAM.—Notice is hereby given that the FIRST

ORDINARY MEETING of the shareholders of this company will be HELD at the

Hen and Chickens Hotel, Birmingham, on TUESDAY, the 26th of February,

at noon precisely, to receive a statement of the accounts to the 31st December

last, and the directors' report, and also to appoint directors and auditors.

By order of the Directors, W. HOLMDEN, Sec.

N.B.—The transfer books will be closed from the 18th inst. inclusive till after

this meeting.

**THE CROWN PRESERVED COAL COMPANY (LIMITED).**

Notice is hereby given, that the ELEVENTH ORDINARY GENERAL

MEETING of the shareholders of this company will be HELD at this office on

Thursday, the 14th inst., at Three o'clock in the afternoon.

Liverpool, February 5, 1867. HENRY FLETCHER, Sec.

**THE CREDIT FONCIER OF ENGLAND (LIMITED).**

Notice is hereby given, that the HALF-YEARLY GENERAL MEET-

ING of the company will be HELD on MONDAY, the 18th February, 1867, in

the Large Room, Exeter Hall, Strand, London, at Twelve o'clock at noon pre-

cisely. By order of the Court of Directors, ALFRED LOWE, Sec.

St. Clement's House, Clement's-lane, London, E.C., 8th Feb., 1867.

**LONDON AND COUNTY BANKING COMPANY.**

ESTABLISHED 1836.

Subscribed capital, £1,875,000, in 37,500 shares of £50 each.

Paid-up capital, £750,000. Reserve fund, £250,000.

DIRECTORS.

NATHANIEL ALEXANDER, Esq., HUGH C. E. CHILDERS, Esq., M.P.

JOHN T. TYRRELL, Esq., JOHN E. LEMMON, Esq., M.P.

THOS. TYRRELL, Esq., EDW. W. T. HAMILTON, Esq., M.P.

PHILIP PATTON BLYTH, Esq., FREDERICK HARRISON, Esq.

JOHN WILLIAM BURMESTER, Esq., WILLIAM CHAMPION JONES, Esq.

COLES CHILD, Esq., WILLIAM NICOL, Esq.

GENERAL MANAGER—William McKewan, Esq.

CHIEF INSPECTOR—W. J. Norfolk, Esq.

ASSISTANT GENERAL MANAGER—William Howard, Esq.

INSPECTORS OF BRANCHES—H. J. Lemon, Esq., and C. Sherring, Esq.

SECRETARY—F. Clappison, Esq.

HEAD OFFICE.—21, LOMBARD STREET.

At the ANNUAL GENERAL MEETING of the proprietors, held on Thursday,

the 7th February, 1867, at the London Tavern, Bishopsgate-street, the following

report for the year ending the 31st December, 1866, was read by the secretary.

HUGH C. E. CHILDERS, Esq., M.P., in the chair.

**REPORT.**

The directors, in submitting to the proprietors the balance-sheet of the bank

for the half-year ending 31st December last, have the pleasure to report that,

after paying all charges, and interest to customers, and making ample

provision for bad and doubtful debts, the net profits amount to £101,598 15s.

This added to £17,468 16s. 6d., brought forward from the last account, produces a total

of £119,067 11s. 6d.

They recommend the payment of the usual dividend of 6 per cent., together

with a bonus of 8 per cent., for the half-year, both free of income tax, which will

absorb £105,500, and leave £14,467 11s. 6d. to be carried forward to profit and

loss new account. The dividend for the whole year 1866, will thus be 25 per cent.

At the meeting in February, 1866, it was intimated to the proprietors that the



## In Chancery.

CLEWS v. ALCOCK.

**MR. JOHN HIGGINGBOTTOM WILL SELL, BY AUCTION,** pursuant to an order of the High Court of Chancery, made in the above cause, with the approval of the Judge to whose Court the said cause is attached, at the Railway Hotel, Stoke-upon-Trent, in the county of Stafford, on Thursday, the 28th day of February, 1867, at Four o'clock in the afternoon, in Nine Lots, an undivided FOURTH PART of and in certain

**FREEHOLD AND IMPORTANT MINERAL PROPERTY,** situate at Bucknall, in the parish of Stoke-upon-Trent, in the county of Stafford, comprising TWO FARM HOUSES, and ARABLE MEADOW, and PASTURE LAND, and DWELLING HOUSES, and of and in HEREDITAMENTS in Hanley, Staffordshire, and the ENTIRETY of HEREDITAMENTS in Burslem.

## PARTICULARS.

LOT 1.—An undivided FOURTH PART of and in a FARM HOUSE and OUT-BUILDINGS, at Bucknall, in the parish of Stoke-upon-Trent, in the county of Stafford, with all those several closes of ARABLE MEADOW, and PASTURE LAND thereunto belonging, as hereinafter described, and in the occupation of William Slater, as tenant from year to year, at an annual rent of £174:—

No. on plan.	Description.	Quantities.
1.—	Homestead at Bucknall	A. R. P.
2.—	Barn meadow	3 2 11
3.—	Cottage meadow	3 1 0
4.—	Near Hot Croft	2 2 10
5.—	Far Hot Croft	5 1 4
6.—	Nip or Jack Croft	2 1 0
7.—	Fell Brook Meadow	4 3 3
8.—	Household or Olders Meadow	1 3 0
9.—	Part of Birchamley and Beamsley	8 0 30
10.—	Part of Birchamley	5 1 20
11.—	Part of Birchamley	2 2 24
12.—	Knowl Rowley	2 1 37
13.—	Part of Birchamley	1 1 15
14.—	Part of Birchamley	3 3 13
15.—	Part of Birchamley	0 2 29
16.—	Part of Birchamley	0 3 0
17.—	Part of Birchamley	3 3 25
18.—	Part of Birchamley	0 2 31
19.—	Far Calf Croft	2 0 14
20.—	Near Calf Croft and Slang	3 2 24
21.—	Heath	3 0 33
22.—	Long Rowley	10 2 9
23.—	Rowley Bottom	1 3 22 A. R. P.
24.—	Rough Shaw	8 2 34—57 0 38
25.—	Also, an undivided fourth part of and in several closes of said farm, but now untenanted; also, an undivided fourth part of and in two cottages or dwelling-houses, adjoining the homestead of the said farm (heretofore occupied as one dwelling-house, and then and now called Bucknall Cottage), with the garden, pleasure-ground, out-buildings, and appurtenances thereto belonging, and therewith held in the occupation of Joseph Twigg and Sarah Heywood, as tenants from year to year, at the annual rent of £18	0 2 13—0 2 13
26.—	Also, an undivided fourth part of and in another farm-house, out-buildings, garden, and appurtenances, situate at Bucknall aforesaid, called Fellbrook, adjoining the first-described farm, together with those several closes of arable, meadow, and pasture land thereto belonging, as hereafter described, as now in the holding of John Deaville, as tenant from year to year, at the annual rent of £28.	0 1 35
27.—	Homestead at Fellbrook	3 2 32
28.—	Meadow	0 0 37
29.—	Part of Birchamley	0 3 4
30.—	Part of Birchamley	4 2 29
31.—	Part of Birchamley	1 1 28—11 1 5
32.—	Also, an undivided fourth part of and in several closes of meadow and pasture land, situate near to the village of Bucknall aforesaid, called the Colley Hills, as hereafter described, in the holding of John Docksey, as tenant from year to year, at the yearly rent of £45, which includes the rent of the two cottages, comprising Lot 3, the same being let together.	6 1 5
33.—	Big Colley Hill and lane	1 3 23
34.—	Near ditto	2 3 14—11 0 2
35.—	Far ditto	2 3 14—11 0 2
36.—	Also, an undivided fourth part of and in other closes of meadow or pasture land, called the Sandy Finney, situate at or near Northwood, Hanley, in the county of Stafford (separated from the farm lastly described by the River Trent), as hereafter described, in the occupation of Edward John Ridgway, Esq., as tenant from year to year, at the yearly rent of £32.	10 0 37—10 0 37
37.—	Sandy Finney	10 0 37—10 0 37

Total 120 1 15  
The mines of coal in this estate are very extensive and valuable, and comprise three distinct series—"The Upper," which is known by the names of the Mossfield coal, Yard coal, Ragman coal, and Birches coal, and it is estimated of these coal there are about 18 acres of each seam under the estate.  
"The Middle" contains the 10-foot coal, Bowling-alley coal, Holly-lane coal, and the Sparrow Butts or Hard Mine coal, which are proved in the immediate district to be of good quality for house firing and manufacturing purposes; of this series of coal it is estimated there are about 70 acres of each seam under the estate.  
"The Lower" contains the Banbury coal, Cockshed coal, Bullhurst coal, and the Wimpenny coal. The first three seams are of good quality for house fuel and manufacturing purposes. Of this lower series it is estimated there are about 110 acres of each of these seams under the estate. In addition to the above, there is a detached portion of about 11 acres, containing the Bullhurst coal and the Wimpenny coal, with two pits sunk upon it, and an engine-house erected.

The estate being within easy distance of the towns of Hanley and Stoke-upon-Trent, and being intersected by the Blidulph Branch of the North Staffordshire Railway, possesses extraordinary facilities of disposing of the coals when got.

LOT 2.—An undivided FOURTH PART of and in all that MESSUAGE or DWELLING HOUSE, situate at Bucknall aforesaid, with the out-buildings, yard, garden, stable, and appurtenances thereto belonging; and also of and in all that close of meadow or pasture land, situate at the rear of such dwelling-house, known as the Big Paddock, as hereafter described, as now in the holding of Jeremiah Beardmore, as tenant from year to year, at the annual rent of £25.

LOT 3.—House, yard, garden, and office.  
Big Paddock, from its desirable situation, being within easy distance of the Staffordshire Potteries, and possessing every requisite convenience, render it a desirable residence for a gentleman engaged in commercial pursuits.

LOT 4.—An undivided FOURTH PART of and in those TWO COTTAGE DWELLING HOUSES, or TENEMENTS, out-buildings, yard, garden, and appurtenances, situate in the village of Bucknall aforesaid, formerly occupied as a public-house, and called the Leg and Partidge Inn, as now in the holding of John Docksey and another, as tenants from year to year. These two cottages are held with the land called the Colley Hills, as before mentioned. A. R. P.  
27.—Two cottages, out-buildings, yard, and garden.

LOT 5.—An undivided FOURTH PART of and in all that MESSUAGE or DWELLING HOUSE, occupied as a beer-house, and called the "Crown and Cushion," situate at Northwood, in the borough of Hanley, with the brew-house, yard, and appurtenances belonging thereto, as now held by Messrs. Baker and King, or their undertenant, as tenants from year to year, at the annual rent of £22. N.B.—The mines are reserved under this lot.

LOT 6.—An undivided FOURTH PART of and in all that PLOT or PARCEL of LAND, situate in Emson-street, adjoining High-street, in the town and borough of Hanley aforesaid, and having a frontage thereto of 90 ft. 3 in., as the same is now enclosed by a brick wall, adjoining the property of Mr. W. Wilson, and contains about 354 yards.

LOT 7.—An undivided FOURTH PART of and in all those TWO COTTAGES or DWELLING HOUSES, and PREMISES situate in Queen-street, adjoining Broad-street, in the borough of Hanley aforesaid, in the holding of Elizabeth Tew and John Pritchard, as weekly tenants, at the weekly rents of 2s. 8d. each.

LOT 8.—An undivided FOURTH PART of and in all that COTTAGE or DWELLING HOUSE and PREMISES, situate in Union-street, within the borough of Hanley aforesaid, as now in the holding of James Stevenson, as weekly tenant, at the weekly rent of 2s. 3d.

LOTS 9, 10, and 11 are copyhold of the manor of Newcastle-under-Lyme.  
N.B.—An annuity of £20, payable during the life of a gentleman, aged 57 years or thereabouts, is charged on the entirety of the foregoing lots. One-fourth of the amount, or £5 per annum, will be made payable out of Lot 1.

LOT 12.—The ENTIRETY of TWO FREEHOLD DWELLING-HOUSES, numbered 12 and 14, Liverpool-road, Burslem, No. 12 being in the occupation of Thomas Robinson, as tenant from year to year, at the annual rent of £25; and Thomas Robinson, as tenant from year to year, in the occupation of Andrew Cliff, as tenant from year to year, at the annual rent of £15. This lot has a commanding frontage to Liverpool-road, and the site contains 614 yards.

LOT 13.—The ENTIRETY of a DWELLING HOUSE, No. 2, High-street, Burslem aforesaid, in the occupation of Thomas Pass, as tenant from year to year, at the annual rate of £12 10s.

Lithographed plans and printed particulars and condition of sale may be had, gratis, of Messrs. ASHERST, MORRIS, and Co., of 6, Old Jewry, in the City of London, solicitors; of Mr. ALCOCK, solicitor, Burslem, Staffordshire; JOHN HIGGINGBOTTOM, of Fenton, Staffordshire; Mr. C. J. H. HOMER, mineral surveyor, Chatterley, near Tunstall, Staffordshire; Mr. RALPH HALES, surveyor, Cobridge, Staffordshire; and of Mr. W. E. TWIGG, solicitor, Burslem.

**SHAREHOLDERS IN PUBLIC COMPANIES** desirous of avoiding calls and further responsibility will find purchasers on applying to Messrs. BARRETT and CO., 78, LOMBARD STREET, CITY, and No. 29, SPRING GARDENS, CHARGING CROSS. Stocks, shares, mining, and other miscellaneous securities bought and sold. Investment Review on application. Cash advances made.

**MR. JOHN POMEROY, HORRABRIDGE, DEVON,** having upwards of 30 years' practical working experience as a copper and tin miner, OFFERS HIS SERVICES TO INSPECT ANY MINING PROPERTY IN ENGLAND. Mr. POMEROY can offer some new tin ground in the West of Devon to the attention of capitalists.

## In the Court of the Vice-Warden of the Stannaries.

Stannaries of Devon.

**PURSUANT** to an Order or Decree, made in the Cause of Walters v. Robbins, the creditors in respect of the EAST TAMAR MINE, in the parish of Beerferri, within the said Stannaries, are, on the 18th day of February inst., to COME IN and PROVE THEIR DEBTS before the Registrar of the said Court, at his office in Truro, or in default thereof they will be peremptorily excluded the benefit of the said decree.

J. G. CHILCOTT, Truro

Dated Registrar's Office, Truro, Feb. 2, 1867.

## In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

**IN** the MATTER of the COMPANIES ACT, 1862, and of the TRESKERRY MINING COMPANY.—The Registrar of the Court has appointed Friday, the 15th day of February inst., at Eleven o'clock in the forenoon, at the Registrar's Office, in Truro, to SETTLE the LIST of CONTRIBUTORIES of the ABOVE-NAMED COMPANY, now made out and deposited at the said office.

WM. MICHELL, Registrar of the said Court

Dated Truro, February 4, 1867.

## In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

**IN** the MATTER of the COMPANIES ACT, 1862, and of the WHEEL SITHNEY AND CARNMEAL UNITED MINING COMPANY.—TO BE SOLD, under the direction of the Registrar of the said Court, BY PUBLIC AUCTION, on Tuesday, 19th February inst., at Twelve o'clock at noon, at WHEEL SITHNEY AND CARNMEAL UNITED MINE, in the parish of Sithney, within the said Stannaries, the MINE SETT or GRANT of the said company, and the undermentioned MINING MACHINERY and MATERIALS—viz.,

ONE 24 inch CYLINDER PUMP ENGINE, ONE 24 inch STAMPING and WINDING ENGINE, 2 balance bobs, 1 shears and sheaves, 1 horse whim, with pulleys and stands, capstan, 1 angle bob, several fathoms 9-in. wood flat rods, flat rods, 2 pairs of yokes, 7-16ths horse whim chain, several whims, horse whims and winze kibbles, brass bell with stand, scales and beams with stands, smiths' cranes, several buckets different sizes, lifting jacks, old iron, rod and flange bolts, staples and glands.

At Engine-shaft on Wheel Sithney Lode: 28 large staples and glands, rod and flange bolts, staples and glands.

There are also for sale the account-house furniture, and a variety of other effects in general use in mines.

The materials may be inspected any time prior to the sale on application to Mr. B. OLIVER, in charge thereof.

HODGE, HOCKIN, AND MARRACK, Solicitors, Truro.  
Dated Registrar's Office, Truro, February 6, 1867.

## In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

**IN** the MATTER of the COMPANIES ACT, 1862, and of the NEW WHEEL MARTHA MINING COMPANY (LIMITED).—TENDERS, stating the highest price that will be given for a parcel of MUNDIC, consisting of about 150 tons, now lying at NEW WHEEL MARTHA MINE, in the parish of Stoke Climland, will be RECEIVED up to the 16th day of February inst., by the voluntary liquidators of the said company, addressed to—

Mr. J. G. CHILCOTT, Truro  
(Agent for Messrs. Geach and Franklin, 27, Great Winchester-street, London, Solicitors for the Liquidators.)  
Dated Registrar's Office, Truro, February 5, 1867.

## In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

**IN** the MATTER of the COMPANIES ACT, 1862, and of the WOODLEY LANE TIN WORKS MINING COMPANY.—TO BE SOLD, under the direction of the Registrar of the said Court, BY PUBLIC AUCTION, on Tuesday, the 19th day of February inst., at Eleven o'clock in the forenoon, at WOODLEY LANE TIN WORKS MINE, in the parish of Lanivet, within the said Stannaries, in Lots, the MINE SETT or GRANT of the said company, and the undermentioned MINING MACHINERY, MATERIALS, and EFFECTS, namely,

24 in. STAMPING ENGINE, fly-wheel and BOILER complete, with 64 heads of stamps complete, &c., and a variety of other articles and effects in general use in mines.

Further information may be obtained on application to Mr. TUCKER, in charge thereof.

HODGE, HOCKIN, AND MARRACK, Solicitors, Truro.  
Dated Registrar's Office, Truro, February 7th, 1867.

## In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

**IN** the MATTER of the COMPANIES ACT, 1862, and of the SOUTH CARADON WHEEL HOOPER MINING COMPANY.—ALL CREDITORS or CLAIMANTS of the ABOVE-NAMED COMPANY who have not received notice from the Registrar of the said Court that their claims have been already admitted, are hereby REQUIRED to COME IN and PROVE THEIR SEVERAL DEBTS or CLAIMS, at the Registrar's Office, Truro, on Monday, the 18th day of February inst., at Eleven o'clock in the forenoon, or in default thereof they will be excluded from the benefit of any distribution made before such proof.

And for the purpose of such proof they are either to attend in person, or by their solicitors or competent agents, or (unless such attendance be required by the Registrar's summons), they are to send affidavits of their several debts or claims to the Registrar of the Court at Truro, such affidavits being sworn either before some Commissioner of the said Court, or before any Court, Judge, Justice, or any Commissioner of one of the Superior Courts lawfully authorised to take and receive affidavits and affirmations.

WM. MICHELL,  
Registrar of the above-named Court, Truro, Cornwall.  
Dated Registrar's Office, Truro, February 7th, 1867.

**TO MINE AGENTS, IRONFOUNDERS, RAILWAY CONTRACTORS, BUILDERS, AND OTHERS.**

**MESSRS. BUCKLAND AND RENDELL WILL SELL, BY PUBLIC AUCTION,** on Monday and Tuesday, 25th and 26th February, 1867, at the WEST BEAM MINE, near ASHBURTON, the VALUABLE MACHINERY and MATERIALS thereon, comprising—

ONE 56 in. cylinder STEAM PUMP ENGINE, 10 ft. stroke, equal beam, and TWO BOILERS, 11 tons each, in excellent condition.  
ONE 40 in. cylinder STEAM PUMP ENGINE, 10 ft. stroke, equal beam, and ONE BOILER about 11 tons (nearly new), with a cast-iron balance-bob.

ONE 24 in. cylinder ROTARY STEAM ENGINE, fly-wheel and drawing gear attached, and ONE BOILER about 11 tons, in excellent condition.  
ONE WATER-WHEEL, 30 ft. diameter, 3 ft. breast, iron rings, axle, pump crank, and powerful DRAWING MACHINE attached, nearly new.

ONE WATER-WHEEL, 30 ft. diameter, 4 ft. breast, iron rings, axle, and ratchet wheels.

ONE WATER-WHEEL, 24 ft. diameter, 3 ft. breast, cast-iron axle and cog wheels.

ONE WATER-WHEEL, 20 ft. diameter, and 3 ft. breast.

2 large capstans, iron axles.

12 in. stuffing box and gland.

2 shears, 54 ft. and 60 ft. high.

1 poppet head, 36 ft. high.

2 iron stamps axles for 24 heads.

2 ditto ditto for 16 " " " "

2 ditto ditto for 12 " " " "

2 ditto ditto for 24 heads with wood frames and lifters.

5 18 in. pumps.

2 15 in. pumps.

2 15 in. ditto, kneepeices.

10 14 in. ditto.

20 12 in. ditto.

4 11 in. ditto.

2 10 in. ditto.

Matchings, 21 in., 14 in., 11 in., 10 in.

1 13 in. doorepiece.

2 12 in. doorepieces.

2 10 in. doorepieces.

1 9 in. doorepiece.

2 8 in. doorepieces.

1 12 in. windbore.

1 11 in. windbore.

2 10 in. windbore.

1 10 in. working barrel, 12 ft.

1 9 in. working barrel, 12 ft.

3 8 in. working barrels, 12 ft.

1 14 in. H piece.

1 14 in. H piece.

1 12 in. pole.

2 10 in. poles.

1 13 in. pole case.

New iron, steel, 2 grindstones, 1 anvil, 1 vice, several new wood sheds, scales, weights, quantity of timber, dressing-floors, kieves, with a quantity of various materials too numerous to mention.

These materials are well worth attention, as they are nearly new, and were purchased regardless of expense.

The mine is situated about five miles from Newton station, to which there is a good road.

For viewing the same, apply to Capt. JOSEPH BAKER, on the mine.

Catalogues may be had on application to the Auctioneers, Newton Abbott; Mr. BETTELEY, Ashburton; or Mr. WILLIAM MATHEWS, engineer, Tavistock; and from whom any further particulars may be obtained.

Refreshments on the table at Twelve o'clock. Sale to commence punctually at One o'clock.—Dated February 6, 1867.

**STEAM-BOILERS** made by WILLIAM WILSON, LILYBANK BOILER WORKS, GLASGOW, on the most improved principles, for home and export. All boilers made of the best material and workmanship, proved and warranted tight under a high pressure, and delivered at any railway station or shipping port in the kingdom at moderate rates. Lithograph of boilers forwarded post-free on application.

## FINAL SALE AT WEST WHEEL JANE MINE.

TUESDAY, 12th day of February, 1867, at Eleven o'clock in the forenoon.

**MR. BURGESS, LAND AND MACHINERY VALUER,** is instructed to SELL, BY PUBLIC AUCTION, at the above mine, all the undermentioned VALUABLE MINE MACHINERY and MATERIALS, viz.,—

60 in. cylinder PUMP ENGINE, 12 ft. stroke, equal beam; ONE BOILER and fittings.

22 in. DOUBLE DRAWING ENGINE, 6 ft. stroke, with cage and steam capstans attached, new condensing work, with ONE BOILER and fittings.

20 in. DOUBLE STAMPING ENGINE, 11 ton fly-wheel, 8 ft. stroke, brass air pump, TWO BOILERS and fittings.

2 16 head axles and lifters; 14 ft. modern calciner and wheel, and necessary attachments, in very good condition; wood stack, 50 ft. high; 2 in. plank and guide chains; V-bob for 60 in. engine; 36 in. smiths' bellows, nearly new; 200 to 250 tons coppery muddle; 7 in. pump, 11 in. ditto, 13 in. ditto, 14 in. ditto; large beam, scales, and weight; small ditto, tin sample ditto, tin separator, 7 in. pole, stuffing box and gland, doorepieces, 10 in. working, 12 in. windbore, dry tube, 2 skips, lot of chain, fagotted rod-plates, fagotted sword and joints; flange and rod bolts, staples and glands, 5 sets wheels, axles and trawlers for underlay; 3, 3, 4, and 6 ft. shives; new grate plates for stamps, clack valves, screw stocks, account-house furniture, 2 long dining room tables; office table, with drawers; kitchen tables, 23 green and Windsor chairs, forms.—Kitchen: Cooking stove, roasting jacks, boilers, saucepans, 3½ doz. knives and forks, spoons, tin candlesticks, large dining set, tea set, glass and earthenware, tin water picher, hand and wash trays, steps, cupboard, box of ironing materials, and sundry other useful articles.

The whole will be sold without reserve, except the engine and attachments.

The engines are all in good condition, and of modern construction.

For any further information, apply to the Auctioneer, Barncoose, Redruth.

Refreshments for purchasers as usual, and a conveyance will meet the train at Scorrier station at 10 A.M., to take the purchasers to and from the sale.

Mr. BURGESS begs an early and punctual attendance.—January 30, 1867.

## SOUTH AUSTRALIA.

**WHEEL ELLEN MINING AND SMELTING WORKS,** comprising a valuable FREEHOLD ESTATE of 700 acres, rich in silver, lead, and copper, and other metals, with strong auriferous deposits.

**CHINNOCK, GALSWORDY, AND CHINNOCK** are instructed to SELL, BY AUCTION, at the New Auction Mart, Tokenhouse-yard, in the City of London, on Tuesday, Feb. 19, at Two o'clock precisely, the valuable

**MINING AND SMELTING WORKS,** Known as WHEEL ELLEN, comprising a FREEHOLD ESTATE of about 700 acres, well timbered, possessing excellent roads and facilities for transit, being situated in the Mount Barker Electoral District of South Australia, only thirty miles from Adelaide, and fifteen miles from a place of shipment, together with the timber and one-half the minerals of two adjoining sections, containing together 250 acres. A large sum has been expended in the erection of buildings, smelting furnaces, dwellings, dressing-floors, machinery, plant, &c.

The property contains a valuable lode, which has been extensively worked, and large quantities of lead, silver, and other metals disposed of, producing highly remunerative results, the lode, as explored, being of constantly increasing value; also a valuable copper lode, very near the surface, and strong auriferous indications.

Particulars and conditions of sale may be obtained of Messrs. YOUNG, JONES, ROBERTS, and HALE, Solicitors, 19, St. Mildred's-court, City; and of Messrs. CHINNOCK and Co., Land Agents and Surveyors, 11, Waterloo-place, Pall Mall, London.

## STAFFORDSHIRE.

TIVIDALE COLLIERY, NEAR DUDLEY.

**MESSRS. OATES, PERRENS, AND WOOLDRIDGE** have received instructions from the mortgagees to OFFER FOR SALE, at the Bush Inn, Dudley, on Saturday, the 2nd day of March next, at Five o'clock in the afternoon, subject to conditions then to be produced, an UNDIVIDED MOIETY of the above—

**VALUABLE MINING ESTATE,** Consisting of FARM HOUSE, EIGHT COTTAGES, STEAM ENGINES, ERECTIONS, TRAMWAYS, OFFICES, and 69 A. R. 5 P. of SURFACE LAND, together with the VALUABLE MINES of THICK and other MEASURES of COAL, IRONSTONE, FIRE CLAY, &c., now under lease for a term of twenty-eight years, fourteen of which will be unexpired at Lady-day next.

NOTE.—This property is situated at Tividale, midway between Dudley and Oldbury, and close to the Stour Valley Railway and Birmingham Canal.

Further particulars may be obtained, and a copy of the lease seen, on application to Messrs. PARTRIDGE and WOODWARD, solicitors, 21, Ann-street, Birmingham; and to view the property, or any information as to the mines, application to be made to Mr. THOS. MILLERSHIP, mine agent, West Bromwich; or Messrs. OATES, PERRENS, and WOOLDRIDGE, auctioneers, Staffordshire.

**VALUABLE COAL FIELD IN THE WEST OF FIFE TO LET.** Town-house of Dunfermline, on Tuesday, the 12th day of February next, at Twelve o'clock noon, on a lease for 21 years, from and after Whitsunday next, or such longer period as may be agreed upon, the WHOLE SEAMS of COAL, SHALE, IRONSTONE, and FIRECLAY, in and under a portion of the lands belonging to the Burgh of Dunfermline, extending to 150 imperial acres, or thereby, and lying about two miles north-east of the burgh.

Most of the coal seams, which have rendered the collieries of Wellwood, Townhill, and Halbeath so famous, are known to be in these lands. There is every facility for conveying the minerals now to be let, by railway or otherwise, in all directions.

Further information may be had, and the conditions of let seen, on application to DAVID LINDALE, Esq., Mining Engineer, Edinburgh; or to JOHN LINDALE, Esq., Town Clerk of Dunfermline.—Dunfermline, Jan. 15, 1867.

**LEAD MINE.—FOR SALE, BY PRIVATE CONTRACT,** near ALSTON, CUMBERLAND. The sett is very extensive, and is traversed by several powerful veins; from one of them 1000 tons of lead ore has been raised from a shaft 20 fathoms deep, and on a



**INEXPLOSIVE BLASTING POWDER**

(Invented by G. A. NEUMEYER)

**CANNOT EXPLODE WHEN EXPOSED TO AIR!**

ALL INTERESTED IN COLLIERY, MINING, AND ENGINEERING OPERATIONS are invited to TEST this NEW INEXPLOSIVE COMPOUND, which meets with great favour upon the Continent, where it has been in use for some time past.

This powder combines STRENGTH with SAFETY to a degree never before known. It is more economical than ordinary blasting-powder:—

- 1.—Because it is cheaper in first cost.
  - 2.—It is lighter than the blasting-powder now in use.
  - 3.—With same bulk (which is less weight) more effect is produced.
- EDWIN H. NEWBY is now prepared to register orders for the above. Particulars, post free, on application to the offices, No. 39A, KING WILLIAM STREET, CITY, LONDON.

**Gun-Cotton—By Royal Letters Patent.**

**PRENTICE'S BLASTING GUN-COTTON** PRODUCES NO SMOKE, and having been further REDUCED IN PRICE is now by far the CHEAPEST as well as the SAFEST material which can be used in any description of mining or quarrying work.

Sample cases, together with every information, may be obtained from—  
**THOMAS PRENTICE AND CO.,**  
173, FENCHURCH STREET, LONDON, E.C.  
AGENT—Mr. Thorne.

**GUN-COTTON** has been constantly used with great success in the tunnel of the Aberdeen Water-Works, lately opened by Her Most Gracious Majesty the Queen.

**NITRO-GLYCERINE, OR NOBEL'S PATENT BLASTING OIL.**—The EXPLOSIVE FORCE of this BLASTING OIL is TEN TIMES that of GUNPOWDER, and the ECONOMY and SAVING in TIME, LABOUR, and COST in removing granite and hard rock, in sinking shafts, driving tunnels, and opening forward in close ends is immense.

It will not explode from a spark or fire, but from concussion alone, and is consequently much less dangerous than gunpowder or gun-cotton.

Being heavier than water it sinks to the bottom of a wet hole, no other tamping than water being required.

One charge of this blasting oil, which is now being used with wonderful effect in all the largest slate quarries in North Wales, will displace as much slate rock as four or five charges of gunpowder; and its great force, acting on a large quantity of good slate rock, shakes and displaces it at the natural joints, or cracks, without damaging the slabs nearly so much as the more numerous blasts from any other blasting material would do.

This invaluable quarrying agent may now be obtained from Messrs. WEBB and Co., Carnarvon, sole consignees from the patentee.

**BOWLING IRON COMPANY,**  
BRADFORD, YORKSHIRE.

BEST CRUCIBLE CAST-STEEL TYRES, AXLES, CRANK AXLES, BOILER PLATES,  
Also COG WHEELS, and other CASTINGS.

This company is prepared to furnish the above-mentioned articles in CAST STEEL of a very superior quality, made principally from their own well-known "BOWLING IRON."

Also BOWLING WROUGHT-IRON SOLID WELDLESS TYRES, of any size and to any section.

**BAGILLT OIL COMPANY (LIMITED),**  
FLINT.

MANUFACTURERS OF BLACK GREASE  
FOR COLLIERY WIRE ROPES, TRAMS, WAGONS, &c., £5 PER TON.  
TORCH AND LAMP OIL, 1s. PER GALLON (Casks free).  
LUBRICATING OIL, 1s. PER GALLON (Casks free).

STEEL! STEEL!! STEEL!!!

**JOHN TURNER, SHEFFIELD, AND STOCKTON-ON-TEES,**  
MANUFACTURER OF SUPERIOR REFINED CAST STEEL FOR  
MINERS' DRILLS.

CUP and TURNING TOOLS, price and quality not surpassed. Try one bar, delivered free at manufacturers' prices.

J. TURNER keeps in stock all kinds of tools suitable for engineers, mining purposes, and shipbuilders, at the Stockton depot, where all communications are requested to be sent.

**GLAHOLM AND ROBSON,**  
HENDON PATENT ROPEWORK, SUNDERLAND.

MANUFACTURERS OF ALL DESCRIPTIONS OF STEEL,  
IRON, and HEMP ROPES FOR COLLIERIES, SHIPS, &c.

Swan Rope Works.

**GARNOCK, BIBBY, AND CO.,**  
CHAPEL STREET, LIVERPOOL.

MANUFACTURERS OF FLAT and ROUND HEMP and IRON and STEEL WIRE ROPES FOR MINING, RAILWAY, and SHIPPING PURPOSES.  
MANILLA ROPE OF SUPERIOR QUALITY, FIFTY PER CENT. STRONGER and THIRTY PER CENT. CHEAPER than Russian hemp rope.  
WIRE ROPE OF FIRST QUALITY WIRE, and the HIGHEST STANDARD OF STRENGTH.

Patent Flat and Round Wire and Hemp Ropes, &c.

**JOHN AND EDWIN WRIGHT, PATENTEES,**  
CITY OFFICE, 19, LONDON STREET, E.C.

ESTABLISHED 1770.

Manufacturers of every description of  
IMPROVED PATENT FLAT and ROUND WIRE ROPES,

From the very best quality of charcoal iron and steel wire.

PATENT FLAT and ROUND HEMP ROPES.

SHIPS' RIGGING, SIGNAL and FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horsfall's patent steel), WIRE, HEMP, FLAX,

ENGINE YARN, COTTON WASTE, &c.

UNIVERSITY WORKS, MILLWALL, POPLAR, LONDON.

UNIVERSITY WORKS, GARRISON STREET, BIRMINGHAM.

No. 2, OSWALD STREET, GLASGOW.

CITY OFFICE, No. 19, LONDON STREET, LONDON.

**COAL CUTTING MACHINERY.**—

The WEST ARDSLEY COMPANY having, by recently patented improvements, perfected their coal cutting machinery, worked by compressed air, are now READY to MAKE CONTRACTS for the CONSTRUCTION and USE of their MACHINES.

The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, their use being found to CHEAPEN the COST and IMPROVE the average SIZE of the COAL, to LIGHTEN the LABOUR, and also to MODIFY the SANITARY CONDITION of the MINE.

All communications to be made to Messrs. FIRTH, DONNISTHORPE, and BOWER, No. 8, Britannia Street, Leeds.

**NOTICE.**—The WEST ARDSLEY COMPANY, having reason to believe that their patents are being infringed upon, hereby give notice that they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may MAKE FOR SALE, or USE ANY MACHINERY in the construction of which any such INFRINGEMENT is MADE.

**BRITISH, COLONIAL, AND FOREIGN PATENTS,**

REGISTRATION OF DESIGNS, COPYRIGHTS, TECHNICAL TRANSLATIONS, DRAWINGS, &c.

MR. MICHAEL HENRY,

Memb. Soc. Arts, Assoc. Soc. Engineers, Author of the "Inventors' Almanac," and the "Defence of the Patent Law."

PATENT REGISTRATION AND COPYRIGHT AGENT AND ADVISER.

Inventors advised in relation to Patents and Inventive and Industrial Matters. Printed information sent free by post. Specifications drawn and revised.

Translations of Catalogues, Trade Notices, and Circulars for the approaching Paris Exhibition. Mr. HENRY has had special experience in technical French, and in French Manufacturing and Commercial Matters.

Offices, 68, Fleet-street, E.C., London, corner of and entrance in Whitefriars-street.

**RAILWAYS AND MINES.**—Capitalists who seek safe and

profitable investments, free from risk, should act only upon the soundest information. The market prices for the day are for the most part governed by the immediate supply and demand, and the operations of speculators, without reference to the bona fide merits of the property. Railways depend upon the traffic, expenditure, and capital accounts, the probabilities of alliance or competition with neighbouring companies, the creation of new shares, the state of the Money Market as affecting the renewal of debentures, and other considerations founded on data to which only one can have access who give special attention to the subject. Mines afford a wider range of profit than any other public securities. The best are free from debt, have large reserves, and pay dividends monthly varying from £10 to £15 per cent. per annum. Instances frequently occur of young mines rising in value 400 or 500 per cent. But this class of security, more than any other, should be purchased only upon the most reliable information. The undersigned devotes special attention to Railways and Mines, and affords every information to capitalists, and effect purchases and sales upon the best possible terms. Thirty years' experience in mining pursuits justifies us in offering our advice to the uninitiated in selecting mines for investment.

Messrs. E. J. BARTLETT AND CO.,

ST. MICHAEL'S HOUSE, CORNHILL, LONDON.

**IMMENSE SAVING OF LABOUR.**

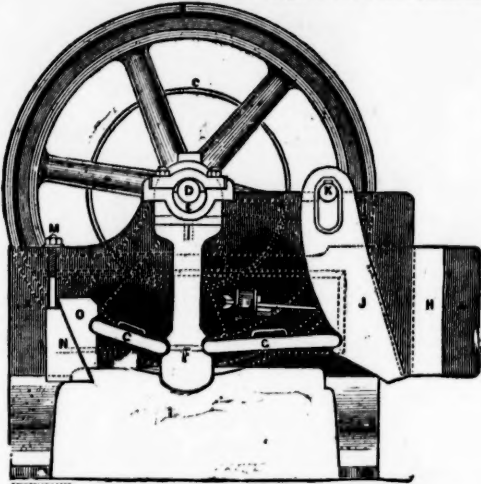
TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, MACADAM ROAD MAKERS, &c., &c.

**BLAKE'S PATENT STONE BREAKER**

OR ORE CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Moreton reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour. For the Parys Mining Company, JAMES WILLIAMS.

H. R. Marsden, Esq.

Edon Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaw, about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery. For the Parys Mining Company, THOS. GOLDSWORTHY & SONS.

H. R. Marsden, Esq.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent. WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz. WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust. Messrs. ORD and MADDISON, Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton. JOHN LANCASTER.

Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour. WM. G. ROBERTS.

General Fremont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or \$75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered a third machine for this estate. SILAS WILLIAMS.

For circulars and testimonials, apply to—

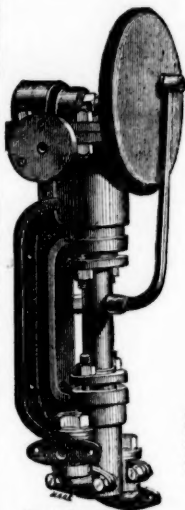
**H. R. MARSDEN, SOHO FOUNDRY,**

MEADOW LANE, LEEDS,

ONLY MAKER IN THE UNITED KINGDOM.

**GIFFARD'S PATENT INJECTOR COMPLETELY SUPERSEDED BY****THE NEW PATENT DONKEY STEAM PUMP**

[SPECIFICATION.]



This Pump is constructed on an entirely novel and simple principle, there being only a crank-shaft and fly-wheel of small size, the slide-valve being worked inside the steam chest by means of a steel crank and friction roller, thus dispensing with eccentric, rod, and straps. All the working parts are made of steel, hardened and polished. The cylinder and pump are in one casting, and bored throughout the body of the pump as well as the stuffing-box. The pump-ram is of the best gun-metal, being cast in one piece with the piston and piston-rod, and fitted accurately to the bored body of the pump, thus ensuring a nearly perfect vacuum in pumping. The stuffing-box glands are also of gun-metal polished. The valves and boxes are of the best gun-metal, the valves being of the spherical description, the covers fitted with brass cages, and the joints faced metal to metal. The slide-valve is of hard bell-metal. The steam-chest, with cylinder end, is in one piece, and may be removed without disturbing either steam or exhaust pipes. The whole engine may be taken to pieces and put together under steam in fifteen minutes, without disturbing any pipes whatever.

Size.		Ram.	Stroke.	Approx. h.p.		Approx. gal.		Price.		Price of Giffard's Injector.	
No. 4.	in.	in.	in.	boiler supplied.	thrown p. hour.	in brass.	in iron.				
5	1½	3	15	230	£10 10	£15	£10 10				
5	1¾	3	22	350	12 12	19	13 10				
6	1¾	4	30	500	14 14	23	16 10				
7	2¼	4	40	700	17 0	27	19 10				
8	2½	5½	55	900	19 10	32	22 10				
9	2¾	5½	75	1150	22 10	36	25 10				
10	3	6½	90	1420	25 10	40	28 10				
11	3¼	6½	110	1720	28 10	45	31 10				
12	3¾	8	120	2000	31 10	50	34 10				

N.B.—Sizes and capacities similar to Giffard's Injector. All guaranteed to work efficiently.

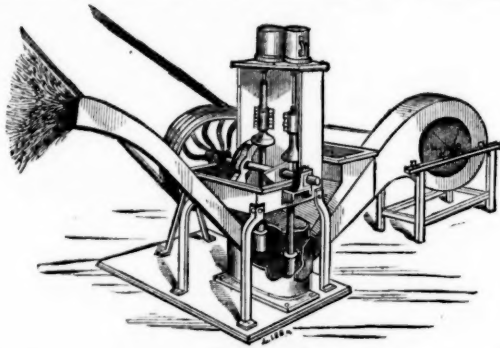
Terms: Nett Cash on Delivery in London.

Giffard's Injector will not force water over 120° Fahr., while these pumps possess the great advantage of being able to pump boiling water. Giffard's Injector will not draw water over 6 ft. deep, while these pumps draw water 15 ft., and by using one size larger than required for forcing the quantity will draw 30 ft. deep. These pumps begin to work at 15 lbs. per square inch; to work at a lower pressure the next larger size must be used. Sizes up to No. 10 kept in stock. Larger sizes, and special pumps for throwing water into tanks, or as fire-engines, can be made in a few days on application to the undersigned.

**BROWN, WILSON, AND CO.,**

80, CANNON STREET, E.C.; AND VAUXHALL IRONWORKS, S.

FRONT ELEVATION.

**CHILDS' PATENT ATMOSPHERIC ORE STAMP AND QUARTZ CRUSHER.**

THIS is an IMPROVED STAMP, and will give as many blows per minute as an ordinary 10-stamp mill, and of far greater force, giving an effective blow of from 150 to 200 tons per minute, and will crush any known ore to an impalpable powder, saving every particle of the product for future operations,—a result not before obtained by any stamping process. Greater economy is combined than by any other known method. The patentee has erected a machine near his office, where he invites (by appointment) experienced and practical miners, engineers, chemists, metallurgists, and all others interested, to inspect its results. Every facility will be given for experiments upon different ores, and all other substances to be crushed.

For particulars, address—**A. B. CHILDS,**  
No. 481, NEW OXFORD STREET, LONDON, W.C.

IMPORTANT REDUCTION IN THE PRICES OF PORTABLE ENGINES FOR 1866.

**CLAYTON, SHUTTLEWORTH, AND CO.,**

ENGINEERS,

MANUFACTURERS OF PORTABLE and FIXED STEAM ENGINES,

MACHINERY FOR PUMPING, HOISTING, GRINDING,

SAWING, &amp;c.

ENGINES FOR STEAM CULTIVATION, SELF MOVING ENGINES for COMMON ROADS, and AGRICULTURAL PURPOSES GENERALLY.

STAMP END WORKS, LINCOLN, and 78, LOMBARD STREET, LONDON.

ALSO AT

LOWENGASSE No. 44, LANDSTRASSE, VIENNA, and GEGENUBER DEM BAHNHOF, PESTH.

Descriptive, illustrated, and priced catalogues free per post.

Special Drawings when required.

THE BEST STEAM THRASHING MACHINERY MADE.

**BICKFORD'S PATENT SAFETY-FUSE OBTAINED THE**

PRIZE MEDALS at the ROYAL EXHIBITION of 1851, at the INTERNATIONAL EXHIBITION of 1862, in London, and at the IMPERIAL EXPOSITION held in Paris, in 1865.

**BICKFORD, SMITH, AND CO.**

OF TUCKINGMILL, CORNWALL, MANUFACTURERS OF PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—

EVERY COIL OF FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH THE COLUMN OF GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.

For particulars, apply to BICKFORD, SMITH, AND CO., TUCKINGMILL, CORNWALL.

**THOMAS TURTON AND SONS,**

MANUFACTURERS OF

CAST STEEL FOR PUNCHES, TAPS, and DIES,

TURNING TOOLS, CHISELS, &amp;c.

CAST STEEL PISTON RODS, CRANK PINS, CON

NECTING RODS, STRAIGHT and CRANK

AXLES, SHAFTS and

FORGINGS OF EVERY DESCRIPTION.

DOUBLE SHEAR STEEL, FILES MARKED

BLISTER STEEL, T. U. R. &amp; N.

SPRING STEEL, EDGE TOOLS MARKED

GERMAN STEEL, WM. GREAVES &amp; SON.

Locomotive Engine, Railway Carriage and Wagon

Springs and Buffers.

**SHEAF WORKS AND SPRING WORKS, SHEFFIELD.**

LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C.,

Where the largest stock of steel, files, tools, &amp;c., may be selected from.

**CREASE'S NEW AND IMPROVED PATENT BORING MACHINE.**—In consequence of the various and IMPORTANT IMPROVEMENTS that an experience of several years has enabled the inventor to introduce into these machines, he can with the most perfect confidence recommend them for their increased DURABILITY, SIMPLICITY, ECONOMY, and SPEED to be attained by their adoption in DRIVING LEVELS or DRIFTS.

The inventor has made arrangements to supply them in any quantity, with warranty. Orders executed according to their date of priority.

Address, EDWARD S. CREASE, Tavistock, Devon.

**BASTIER'S CHAIN PUMP.**—

This patent pump is the MOST EFFICIENT in existence for LIFTING ANY QUANTITY of WATER from ANY DEPTH. One lifting from a depth of 170 ft. may be seen at work daily, on application to the

SOLE LICENSEES,

MESSRS. J. JACKSON AND CO., ENGINEERS, 17, GRACECHURCH STREET, LONDON, E.C.

Who SUPPLY PUMPS and LICENCES.

Communications to Mr. Bastier, the patentee, to be sent to the same address.

AGENT FOR THE COUNTIES OF NORTHUMBERLAND AND DURHAM, YORKSHIRE, DERBYSHIRE, and NORTH STAFFORDSHIRE,

Mr. THOMAS GREENER, MINING OFFICE, NORTHGATE, DARLINGTON.

AGENTS FOR SCOTLAND,

MESSRS. P. and W. MACLELLAN, 127 and 129, IRONGATE, GLASGOW.

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